Juristic Democracy:
Using Specific Deliberative Judgments to Identify or Form Global Norms

Walter F. Baber
California State University Long Beach

and

Robert V. Bartlett
University of Vermont

Paper presented at the Colorado Conference on Earth System Governance
18 May 2011
Fort Collins, Colorado, USA
Juristic democracy is an approach to improving and reforming global governance by establishing a fruitful means for creating and legitimizing transnational norms that can serve as the basis for a global common law (Baber and Bartlett 2009). Juristic democracy presents a citizen jury with a concrete (but hypothetical) problem and asks it to come to a unanimous resolution of that problem. A substantial number of these deliberative outcomes are aggregated through a process of restatement into a general account of the outcome of the “case” that represents the considered judgment of the relevant population regarding the normative question that the dispute entails. The discursively constrained environment of the jury and the neutrality resulting from the hypothetical nature of the case allows ordinary citizens to contribute to collective will identification (or formation) without engaging their self-interests or ideological biases (Baber and Bartlett 2005).

As a first step toward moving beyond mere theories and immodest proposals, here we offer a concrete demonstration of this process by describing three hypothetical cases we have crafted to isolate and highlight three real-world normative environmental governance conflicts: (1) the responsibility for shared environmental impacts of development having vastly differential benefits; (2) the adequacy of informed consent as a regulative strategy for trade in hazardous materials; and (3) the appropriateness of alternative regulatory schemes for allocating risks and benefits from differential transboundary pollution of a common resource. The cases are as purely hypothetical as we can make them, but the conflicts are directly analogous to real world conflicts over which no normative consensus appears to have
evolved. We describe these cases and the pilot process of presenting them to citizen juries for possible resolution to illustrate the utility of juristic democracy and to show how it can be deployed to advance both research and practice in environmental governance. In each of the next three sections, we describe a panel deliberation and the case upon which it was based. In the final section, we offer our assessment of these pilot experimental experiences and their potential to affect the course of environmental governance.

All of the hypothetical cases that we are using in this research present jurors with disputes arising on the imaginary continent of Terra. Four nations occupy the Terran landmass (though one plays no role in these particular simulations). They share a history of colonial occupation from which they emerged along different trajectories as a consequence of their geographic and demographic diversity and their different experiences under colonial rule.

The eastern and northern regions of Terra are occupied by Panterra, the largest, most populous, and most economically advanced of the continent's nations. The central region of the continent is shared by two nation-states. Along the southern coast lies the nation of Meerland. This region is not as prosperous as neighboring Panterra, but it is undergoing a period of rapid economic development fueled largely by the use of its forested mountains and unspoiled coast for eco-tourism. North of Meerland lies Arroya, a sparsely populated and agrarian nation that is almost entirely desert because it lies behind the rain shield of Meerland’s mountains. Arroya’s only arable region lies along the banks of the Terra River, which also marks the boundaries of these three countries along their shared borders. More complete descriptions of these nations and a map of the Terran continent--materials provided to all panelists--can be found in Appendix I.
Case #1 – Common But Differentiated Responsibility

The dispute that lies at the heart of our first scenario involves the use by Panterra of geothermal resources for the production of electricity. The resulting wastewater, although clean, is much warmer than the water of the Terra River into which it is discharged. For the purposes of the deliberation, the jurors are provided with the following set of facts, to which the countries involved have stipulated:

- The residents of the Republic of Arroya living in the vicinity of the Terra River rely on the Terra River salmon fishery for approximately 80% of the protein in their daily diet.
- Throughout the recorded history of the Arroyan people, the Terra River salmon have spawned in the area immediately downstream of the Terra Rapids near the border between Arroya and the Republic of Meerland (Meerland).
- In 1993, the Federated Republic of Panterra (Panterra) began to develop geothermal electrical generating facilities on its own territory near the Terra River and its borders with Meerland and Arroya. In 1999, Meerland also began to produce geothermal electricity on its territory and to discharge water in areas that ultimately drain into the Terra River.
- The geothermal facilities throughout this area discharge large quantities of water into the Terra River. Even when this water is held in catchments and allowed to reach ambient air temperature, it is still significantly warmer than the water of the Terra River.
- Beginning in 1994, measurable increases in the temperature of the Terra River were
detected below the Terra Falls in the area of the salmon spawning grounds. These temperature increases have continued since 1994 and, by 2006, the Terra River was without salmon across 4/5ths of its length on the Arroyan border.

- If temperature increases continue, wildlife biologists are unanimous in their view that the salmon spawning grounds will continue to shift downstream and that there will be no salmon in the Arroyan segment of the Terra River within five to ten years.
- The parties also share the view that if increases in ambient river water temperature levels could be limited to no more than 0.5 C, salmon would likely return to the Terra River along all of its Arroyan segment. Limiting increases in ambient river water temperature to no more than 0.5 C would require a 60% reduction in geothermal production of electricity, given no changes in currently available technology. Further, the parties agree that no technological innovations that would allow for reductions in river water temperature without reducing electrical production are currently available or foreseeable in the future.

Based upon this set of facts, Arroya has petitioned an international tribunal for an order directing the Federated Republic of Panterra and the Republic of Meerland to reduce their geothermal electrical production by 60% from 2006 levels and to refrain from exceeding that limit in the future. (The list of stipulated facts and all petitions are provided in Appendix II.) The Arroyan petition asks that the panel retain jurisdiction for an indefinite period of time. Arroya argues that it should be allowed to reserve the right to develop geothermal resources equivalent to those of Panterra and Meerland (on a proportionate per capita basis) and that the panel should use its retained jurisdiction to
mandate further future reductions in Panterran and Meerlandan production to accommodate Arroyan development as it may occur.

Not surprisingly, Panterra objects. Panterra cross-petitions the tribunal to require all parties to return their geothermal electricity production to 2001 levels (which all parties agree would constitute an overall 60% reduction). This remedial measure would, Panterra accurately contends, impose a roughly equal financial loss on both Panterra and Meerland in terms of the total value of the infrastructure investment that would have to be decommissioned.

In a cross-petition of its own, Meerland asks the panel to mandate a 70% reduction in Panterran geothermal production and asks that Meerland be allowed to increase its geothermal production by an amount equivalent to 10% of current Panterran production (thus meeting the 60% overall objective). This would allow Meerland to approach a level of geothermal electrical production that would be equivalent (as a percentage of its total electrical production) to the Panterran electrical production profile. This increase in Meerland’s electrical production would allow it to meet its other economic development objectives. Meerland vigorously objects to the Panterran remedial proposal on the grounds that 70% of its production facilities have been constructed since 2001 whereas only 15% of Panterra's much more extensive production capacity has been built during that time. As a factual matter, the Meerland argument is accurate in its description of the history of geothermal development in Panterra and Meerland and the implications of the Panterran proposal. Whereas the financial loss caused by the Panterran proposal would be roughly the same for both Panterra and Meerland, geothermal production by the latter would be harder hit.
By now it should be clear that the underlying normative issues presented by this dispute have the same structure as those involved in the debates over the Kyoto Protocol and any successor agreements to regulate climate warming gasses. Yet in all of our pilot jury deliberations (so far three in Italy and four in the United States, with 97 participants on panels ranging in size from eight to 22), we have yet to find a participant who perceived the connection. Trial participants have universally attempted to resolve the question on its own merits without invoking any real world disputes to advance their analyses. Moreover, the juries have arrived at their collective judgments with a surprising level of consensus. As can be seen in Table 1, there was near unanimity regarding the main thrust of Arroya’s petition. But Arroya’s request for a “set aside” that would allow that country to develop its own geothermal program received support from only two of seven panels. The “equity based” requests of Meerland were favored by three panels. A significant surprise was the invocation by some Italian participants of the “right to an adequate diet” in support of the Arroyan petition. This justification did not appear in the trials conducted in the United States (FDR’s "Four Freedoms" notwithstanding).

A review of the reasons given for the judgments suggests that there were several considerations, several threads of discourse, which should be represented in any large scale attempt to adjudicate existing differences over climate change through deliberative discourse. First, there is broad agreement on the proposition that nations contributing most to the problem should bear most of the costs of any solution. Second, “protection from harm” is a primary consideration and the pressing issue is “environmental” rather than economic. Third, to the extent that economics in involved, future resource exploitation should be “distributed equally” rather than differentially and alternate means
of development should be sought that do not involve wealthier nations being “penalized”
(although a distinct minority view suggested precisely that). Further deliberation panels
will, undoubtedly, add more discursive threads that will flesh out our understanding of

**Table 1**

*Final Judgments and Reasons, All Juries 2009-2010*

**Petition One**

<table>
<thead>
<tr>
<th>Place and Date</th>
<th>Judgment</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Italy #1 March 2009</strong></td>
<td>In favor or Arroya but future pollution rights distributed on a per capita basis</td>
<td>Pollution rights should be distributed equally per capita</td>
</tr>
<tr>
<td><strong>Italy #2 March 2009</strong></td>
<td>Overall cap at 60% but reduce proportionately per capita</td>
<td>Arroya deserves protection from harm, but has no right to future geothermal development</td>
</tr>
<tr>
<td><strong>Italy #3 March 2009</strong></td>
<td>In favor of Arroya, but no provision for future Arroyan geothermal development</td>
<td>Arroya deserves protection from harm; Arroya should develop differently</td>
</tr>
<tr>
<td><strong>USA February 2009</strong> (dissent)</td>
<td>Panterra to cut twice as much as Meerland, totaling 60% overall</td>
<td>Meerland is extremely dependent on geothermal; Panterra has other options</td>
</tr>
<tr>
<td>(dissent)</td>
<td>In favor of Panterra</td>
<td>Panterra should not be penalized for being wealthier and stable</td>
</tr>
<tr>
<td><strong>USA December 2009</strong></td>
<td>In favor of Arroya</td>
<td>Proportional reduction is fair; Arroya should have this future development opportunity</td>
</tr>
<tr>
<td><strong>USA April 2010</strong></td>
<td>Panterra to cut twice as much as Meerland, totaling 60% overall</td>
<td>Panterra cutting twice as much as Meerland is the most fair</td>
</tr>
<tr>
<td><strong>October 2010</strong></td>
<td>In favor of Arroya, but also Arroya must be allowed to</td>
<td>The most pressing issue is environmental</td>
</tr>
</tbody>
</table>
what constitutes a fully “representative” discourse on climate change. But even at this
stage, serious doubt has been cast on at least some aspects of the normative foundations of
the Kyoto Protocol and the post-Kyoto negotiations.

**Case #2 - Prior Informed Consent and Trade in Hazardous Materials**

A second hypothetical scenario asks jury participants, in a relatively straightforward
manner, to weigh the pros and cons of an informed consent regime for the regulation of
trade in hazardous materials. They are provided with the following pattern of facts, which
the involved countries take as undisputed:

- The central and northern regions of Meerland (north of the southern
  mountains) comprise some of the most productive agricultural regions of the
  Terran continent. Agricultural production in this area constitutes 40% of the
  Meerland economy.

- In addition to satisfying virtually all of Meerland’s food requirements (the
  remainder consisting of fishing along the southern coast), this agricultural
  production also allows Meerland to export food in quantities sufficient to
  maintain a positive balance of trade that has contributed to its long-term
  economic stability.

- Meerland’s success in agricultural production is due to two major factors. First
  are the favorable climate and soil conditions in the region north of its
mountains. Second, the country’s farmers have achieved unusually high levels of productivity through a combination of careful land management and the aggressive use of chemical fertilizers and pesticides. These chemicals are almost entirely imported from neighboring Panterra.

- Imports of agricultural chemicals into Meerland are conducted entirely by private companies (manufactures and retailers) and local farm cooperatives. Neither government has intervened in this activity beyond the granting of business operating licenses that are typical in other economic sectors.

- Over the years, concern has grown within Meerland’s increasingly influential environmental movement about the long-term effects of the country’s significant and increasing use of agricultural chemicals. Environmentalists point out that the use of these chemicals within their country of origin (Panterra) is far more strictly regulated than it is in Meerland. Standards for record-keeping, limits on application levels, and safety rules for handling and disposal are all demanding and strictly enforced in Panterra. These requirements are built into a rigorous licensing regime that covers the entire life-cycle of agricultural chemicals and their use within Panterra’s boundaries.

- Between the pressure brought on Meerland’s government by the environmental movement and the long-standing hostility toward Panterra among Meerland’s political conservatives, the current “hands-off” attitude toward the importation of agricultural chemicals has become untenable.

- This odd coalition of political forces cannot agree on a policy that it wants its government to pursue. Environmentalists want a strict regulatory regime
similar to that in existence in Panterra. Conservatives want to confront the Panterran government on the issue, but they instinctively rebel at the idea of adopting a strict regulatory regime. They do not want to see so intrusive a level of government intervention in the economy. Moreover, they do not want to pay for the creation of an entirely new regulatory agency within the Meerland government. All sides agree that the government currently lacks the expertise and the resources that would be required to implement a regulatory system that would approximate that of Panterra. The government, however, believes that it has come up with an approach that will satisfy both of these constituencies and produce the level of environmental protection that citizens of Panterra enjoy.

- Some of the chemicals Meerland imports are actually banned in Panterra, either entirely or for particular uses. In fact, a few of the chemicals in question have been developed entirely for use in the crop and pest conditions in Meerland and are of no value in any other market. Moreover, Panterra declines to require complete disclosure of all scientific information about chemicals that its manufacturers export, citing patent protection concerns and the business confidentiality and nondisclosure requirements of this highly competitive industry.

In its petition to an international tribunal, the Republic of Meerland asks for an order directing the Federated Republic of Panterra to prohibit any and all trade in agricultural chemicals between individuals, groups, or corporations within its borders and those within the borders of Meerland that would not be licensed to engage in the production,
distribution, use, or disposal of those chemicals in Panterra. (The list of stipulated facts and all petitions are provided in Appendix II.) In effect, the government of Meerland is asking the court to require Panterra to extend its regulatory jurisdiction and enforcement procedures to parties within Meerland. Meerland argues that Panterra is best equipped to license handlers of agricultural chemicals and pledges to conform its business licensing actions to licensing decisions made by Panterran regulators.

In response to the Meerlandan petition, Panterra makes the following arguments: First, that the trade in chemicals between Meerland and Panterra is conducted by private individuals who are violating no Panterran law. Second, that trade in agricultural chemicals between the two countries is free and produces reciprocal benefits. Third, that Meerland is better situated to regulate its own citizens. Finally, Panterra argues that it should not be required to bear the financial burden of extending its regulatory jurisdiction to activities by private individuals in Meerland.

As an alternative to Meerland’s petition, Panterra proposes a system of “prior informed consent” (PIC). Under a PIC system, Panterra would inform Meerland of proposed exports of chemicals to that country in advance, their quantities and primary characteristics, and the necessary steps for their safe handling. Meerland would also be informed of the identity of the exporting entities and the schedules of proposed shipments. Meerland could then grant or withhold its consent for each shipment.

Chemicals and Pesticides in International Trade. Meerland's argument to import Panterran regulations along with Panterran chemicals is based on variants of the polluter pays principle and the Brundtland taking-policy-to-the-sources principle. As can be seen

### Table 2
**Final Judgments and Reasons, All Juries 2009-2010**
**Petition Two**

<table>
<thead>
<tr>
<th>Place and Date</th>
<th>Judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy #1 March 2009</td>
<td>In favor of Meerland, but Meerland also ordered to establish a regulatory licensing body</td>
</tr>
<tr>
<td>Italy #2 March 2009</td>
<td>In favor of Panterra, but Meerland ordered to create a system to control and limit</td>
</tr>
<tr>
<td>Italy #3 March 2009</td>
<td>In favor of Panterra</td>
</tr>
<tr>
<td>USA April 2009</td>
<td>In favor of Panterra</td>
</tr>
<tr>
<td>USA November 2009</td>
<td>In favor of Panterra, but Panterra must phase out export of products banned in Panterra</td>
</tr>
<tr>
<td>USA March 2010</td>
<td>In favor of Panterra, and Meerland must create a regulatory system</td>
</tr>
<tr>
<td>USA October 2010</td>
<td>In favor of Panterra; also Meerland should establish</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public health consequences; different regulatory capacities of different states</td>
</tr>
<tr>
<td>Panterra should not be responsible for internal Meerland problems; PIC is a good system to control trade</td>
</tr>
<tr>
<td>Panterra should not be responsible for what Meerland citizens buy; perhaps this trade should be controlled and taxed</td>
</tr>
<tr>
<td>Meerland is a sovereign nation responsible for monitoring and regulating imports; Panterra's responsibility is to provide all pertinent information</td>
</tr>
<tr>
<td>Not violating sovereignty is important</td>
</tr>
<tr>
<td>Meerland needs to maintain its sovereignty and to respect patents</td>
</tr>
<tr>
<td>Graduated tariffs should be based on toxicity</td>
</tr>
</tbody>
</table>
regulations, Panterra should sell only to licensed companies, and there should be tariffs based on toxicity

in Table 2, all of our pilot panel deliberations (so far three in Italy and four in the USA, with 128 participants on panels ranging in size from seven to 32) arrived at a consensus, and all but one favored the norm of prior informed consent proposed by Panterra. Four juries were not comfortable merely endorsing one or the other normative position and also enjoined Meerland to create its own regulatory system for hazardous chemicals. Two panels imposed additional requirements on Panterra as well.

Examination of the reasons given for these judgments documents the importance of several distinct discursive threads. First, there is broad support for the value of national sovereignty and for national responsibility for regulatory matters. This is moderated only by a minority recognition of the public health consequences of “different regulatory capacities of different states.” Second, prior informed consent is recognized as a “good system to control trade” as a general matter and as satisfying the responsibilities of exporting countries. Third, support for regulatory mechanisms internal to importing countries (even including import tariffs) is evidently the preferred approach to trade in hazardous substances. As in the prior case, additional discursive threads and different patterns of normative emphasis would undoubtedly appear in the deliberations of more panels and panels of greater heterogeneity. But the broad substantive outlines of a representative discourse are clearly visible.

Case #3 - Regulating Transboundary Pollution
A third hypothetical case involves a problem of transboundary water pollution caused by the runoff of agricultural chemicals. The dispute presents in an especially pointed way the issue of equity that arises between a nation with a productive agricultural sector and one that struggles to feed its population. Participants in the deliberative panel are provided with a set of facts that each party to the dispute have agreed are accurate:

- The central and northern regions of Meerland (north of the southern mountains) are some of the most productive agricultural regions of the Terran continent. Agricultural production in constitutes 40% of the Meerland economy.
- In addition to satisfying virtually all of Meerland’s food requirements (the remainder consisting of fishing along the southern coast), this agricultural production also allows Meerland to export food in quantities sufficient to maintain a positive balance of trade that has contributed to its economic stability.
- Meerland’s success in agricultural production is due to two major factors. First are the favorable climate and soil conditions in the region north of its mountains. Second, the country’s farmers have achieved unusually high levels of productivity through a combination of careful land management and the aggressive use of chemical fertilizers and pesticides.
- The western half of Meerland’s agricultural region drains into small creeks and streams which, as they flow north into lower and dryer regions, dissipate as a result of evaporation. No more than ten percent of these minor waterways reach Meerland’s northern border with Arroya.
The western half of Meerland’s agricultural region is characterized by wetter conditions and the terrain is steeper, resulting in more rapid run off. This area drains into the Terra River watershed. Since Meerland began keeping records of chemical concentrations along its small stretch of riverbank in 1969, concentrations of organic pollutants (residue from the extensive use of fertilizers) have increased dramatically. By 1985, levels of these substances had risen to the point that significant levels of eutrophication (oxygen deprivation) were causing seasonal die-offs of Terran River salmon in the southern regions of Arroya. The problem has grown since that time to the point that the Terran River is devoid of fish through the southernmost quarter of its Arroyan course.

The adjacent south-eastern area of Arroya is, for climatic reasons, the most productive agricultural region of that country. The government has been trying to encourage greater agricultural productivity in this area, both to secure the nation’s food supply and to generate export food products to help solve the country’s persistent balance of trade problems. Part of this effort has involved the creation of government subsidies that encourage both the development of new ditch irrigation systems and the use of organic fertilizers, both naturally occurring and artificial.

Arroyan agricultural production has now begun to contribute to the eutrophication problem in the Terra River. Although there is some uncertainty due to a lack of technical expertise in Arroyan government agencies, the country’s contribution to the decline in water quality in the Terra has been
estimated by international environmental organizations to be roughly one tenth that of Meerland’s.

- All parties agree that a reduction in organic runoff in Meerland to levels observed in 1980 would allow fish to return to the Terran River at least as far south as the Arroya/Meerland border (assuming no other sources of pollution are added).

Based upon this set of facts, the Republic of Arroya petitions an international tribunal for an order directing the Republic of Meerland to prohibit by statute the use within its territory of organic fertilizers, both artificial and naturally occurring, to 90% of the levels reported in 1980. (The list of stipulated facts and all petitions are provided in Appendix II.) That prohibition would allow for an approximate doubling of runoff from Arroyan sources, an allowance that Arroya contends would allow it to complete its planned expansion of agricultural production in south-eastern Arroya. Arroya’s contribution of pollutants into the Terra River would still be less than one-quarter the quantity of those contributed by Meerland, despite the fact that Arroya has twice Meerland’s population and over one-thousand times its river frontage.

In response to the Arroyan petition, Meerland makes the following arguments: First, that outright prohibitions on the use of chemical fertilizers are inefficient as a means of controlling pollution because they do not take into account the costs and benefits of the policy. Second, that Meerland’s farm community should not be required to sacrifice more than farmers in Arroya to protect Terra River water quality. Finally, that use by Meerland of fertilizers in the Terra River watershed has continued unchallenged over so long a
course of time that it has created an established right to that beneficial use of the resources in that territory. As an alternative to Arroya’s petition, Meerland claims the prior use right to the assimilative capacity of the river up to its 1980 levels of nutrient runoff, but only if Arroya also limits runoff to its own 1980 levels. Meerland proposes to use a permit system to reduce its nutrient runoff over time to 1980 levels by allocating tradable permits at no cost to current Meerland farmers. It proposes to allow Arroya (or Arroyan citizens) to purchase these permits in the open market it will establish for their sale at whatever price the market will bear.

In short, Arroya asks the court to impose fairly conventional command-and-control regulations on the use of agricultural chemicals and to structure those regulations in a way that will allow them to increase its use of those chemicals until they more nearly approach the levels already used by Meerland. Meerland counters with a market-based system of tradable permits. Meerland further proposes that these permits be tradable across a transboundary control zone, allowing them to be allocated according to the demand (and capacity to pay) in competing areas.

Although so far none of our jurists seem to have noticed, activists and professionals engaged in current debates about the development of international environmental policy for greenhouse gasses should recognize here the normative debates that lie at the heart of the contentious debates, negotiations, and posturing about how climate changing emissions ought to be regulated. As can be seen in Table 3, six of our seven panels (127 participants on panels ranging in size from seven to 29) arrived at a consensus, but no two panels agreed with each other, although four did support some variant of a tradable permit program. The judgments of the other three panels ranged widely, from a denial of all
petitions, to the imposition of specific pollution regulations, to mandated mediation. The reasons cited for these decisions varied similarly, but they tended to emphasize “net decreases of pollution” and “prevention” over any considerations of regulatory efficiency.

Table 3
Final Judgments and Reasons, All Juries 2009-2010
Petition Three

<table>
<thead>
<tr>
<th>Place and Date</th>
<th>Judgment</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy #1 April 2009</td>
<td>In favor of Meerland</td>
<td>Prevention; common but differentiated responsibility</td>
</tr>
<tr>
<td>Italy #2 April 2009</td>
<td>In favor of Meerland; also all parties to commit to finding new environmentally friendly chemicals</td>
<td>Common but differentiated responsibility</td>
</tr>
<tr>
<td>Italy #3 April 2009</td>
<td>All petitions denied</td>
<td>Neither petition correct; needed are regulatory limits on specific fertilizers</td>
</tr>
<tr>
<td>USA December 2009</td>
<td>Meerland to reduce to 45% of 1980 level, allowing Arroya to increase to this same level</td>
<td>Net decrease of pollution; access to salmon protein; long term solution</td>
</tr>
<tr>
<td>(dissent)</td>
<td>Meerland to decrease 80% while Arroya does not increase</td>
<td>Arroya should not be allowed to increase</td>
</tr>
<tr>
<td>USA March 2010</td>
<td>Cap and trade to a 90% reduction, with Arroya getting permits for free and Meerland farmers buying</td>
<td>[no reasons given]</td>
</tr>
<tr>
<td>USA #1 October 2010</td>
<td>Buffer zones required along the river; Panterra to serve as mediator for permit distribution and inspection regulation; increasing percentage reduction of pollution over time</td>
<td>Meerland can't be the only one paying for the pollution problem</td>
</tr>
</tbody>
</table>
USA #2 October 2010  In favor of Meerland, but it must get to 1980 levels in five years and must reduce tariffs on food exports to Arroya for five years  Helps the people of Arroya without drastically affecting Meerland's economy

The implications of these results are as disquieting as they are clear. More than two decades after the idea of tradable permits became a mainstream widely accepted idea among policy wonks of rich countries, our pilot deliberative juries suggest that any societal norm underpinning it is, at best, still emerging. This scenario may well illustrate the capacity of juristic democracy usefully to map normative dissensus and to problematize unrepresentative elite consensus. Should further deliberations reinforce these findings, a major rethink of the fascination with the idea of regulatory efficiency would be in order. Environmental professionals should either shift their emphasis toward guaranteed outcomes or attend to the need to persuade citizens that the search for ways to make markets fix the problems that markets have created is worth pursuing after all.

Eureka! But What Is it?

At the most general level, what we have found in this as yet very limited experiment is that there is often significant overlap among “jurors” about how to resolve particular environmental disputes but usually less agreement about the reasons for their decisions. Intuitively, this tracks experience with other sorts of juries (Vidmar and Hans 2007). The focus on a discrete task tends to diminish people’s interest in agreement for the “right” reasons. It may be worthwhile, nevertheless, to look at each of these issues (outcomes and reasons) separately.

If the patterns of consensus that have emerged so far continue to be replicated in many
more juries, especially as experience with participants in countries other than Italy and the United States is added, any conclusions based on those findings will have to overcome the criticism that the consensus is an artifact of the experiment’s design. More specifically, it could be argued that the consensus is “built in” to the experiment by the way that we have structured the problems or framed the arguments of the parties. For that to be a telling criticism, two things would have to be true. First, the structure and framing of the experimental “trial” would have to be invalid in some way. We would have had to have characterized the underlying dispute in a way that lacks verisimilitude or we would have had to frame arguments for contending resolutions of the dispute that misrepresent the reasons that are (or might reasonably be) given by advocates of such solutions. Second, the flaw in the construction of the hypothetical problem has to be determinative of the outcome. Otherwise, we would have only a case of what appellate courts characterize as harmless error.

With such a small number of experimental panels so far, it is possible only to frame this criticism, not to evaluate it. But a few observations by way of response are in order. First, if either the problem presented by the case or the arguments advanced by the parties are thought to be invalid in some way, the clear answer is that repeated experimental deliberations with slight variations in the elements in question should be sufficient to determine that fact. Either varying those inputs will produce different outcomes, or variations in those elements will be shown to not to be determinative of the experimental outcomes. Second, tracking the impact of various substantive elements of the case is relatively easy to do. If those elements appear in either the initial responses given by participants in advance of the deliberation or in the reasons given by the juries for their
ultimate rulings, then their salience is demonstrated and the importance of their validity to
the outcome of the experiment can be gauged. So the means of dealing with questions of
validity are already part of the experimental design. Third, to the extent that the validity
of the case design (or the irrelevance of changes in it to the outcome) can be shown, any
resulting patterns of consensus that are found would seem to be implicit in the problem
being studied rather than the methodology being employed.

Findings of that sort are, of course, the objective of this research. They are suggestive
of a tacit knowledge of the world finding its way into peoples’ practical problem solving
(Polanyi 1983). Increased diversity in a deliberating population brings forth new
arguments and additional information that have the potential to improve collective will
formation. This is consistent with existing research on small group decision making that
emphasizes the risks associated with homogeneity and the value of diversity (Sunstein,
2006). It also suggests that regulatory decision making in the international arena, where
diversity is at a maximum and the power to coerce is at a minimum, has the potential to
produce results of a quality equal (or superior) to that expected at the national level.

With respect to the reasons given by juries in support of their rulings, two things are of
singular importance. First, the statements of reason play the same role in this research that
written opinions of judges play in the study of law. They provide us with the raw material
for generalization. What “rule” is the decision maker employing, what is its reach, and
what exceptions to its application might exist? In the law, this sort of analysis underlies
the “restatement” work done by the American Law Institute. ALI restatements are in-
depth analyses of decisions in various fields of the common law that summarize and
analyze judicial opinions in those areas. The resulting volumes are some of the most
widely respected publications in U.S. law, serving as guides for research and teaching, persuasive authority for judges inclined to use them, and points of departure for the construction of model codes and for the progressive development of the law.

Second, the reasons offered for preferred outcomes of these hypothetical cases, both by individual participants prior to deliberation and by juries in their rulings, offer us a catalog of what we might call “discursive threads.” These are expressions that call out a feature of the world (as described by the hypothetical) and relate it to some other feature of the world in a way that supports one or other of the claims made by parties to the dispute. Out of these threads, people create discourses through which they organize and attach value to their experiences in ways that supply them with the normative rules they need to resolve particular disputes (theories of the case, as lawyers would describe it). Dryzek (2010) has argued that these discourses, rather than ideologies, groups, or individual interests, should be the core concern of any form of deliberative representation that we might want to add to (or substitute for) the conventional institutions of liberalism. Cataloging these discourses will allow us to determine when we have compiled a comprehensive list of reasons that might legitimately be given for any particular policy outcome or dispute resolution. By using these discourses to select participants in citizen juries and other deliberative exercises, we can achieve a level of representative legitimacy and discursive accuracy that escapes institutions whose membership is determined by election, self-selection, or random draw.

Research of this sort offers at least three important advantages over methodologies involving the study of aggregate public opinion. First, it sometimes can be done where valid measurements of public opinion are difficult for political or methodological reasons.
Second, qualitative methods of this sort allow us to explore the variable meanings assigned by members of different cultural and national groups to so-called “raw facts.” Legal scholars already use such methods to study the voluminous legal texts submitted to appellate courts in socially and politically contentious cases (Grover 2010). What this kind of research makes clear is that “facts” are constructed and interpreted in widely differing contexts by various parties involved in cases--either as parties or as fact finders.

Third, empirical research on the normative foundations used by those in various cultures and nations to resolve concrete environmental disputes provides us with the raw materials needed to construct a global constitutional pluralism. It provides us a potential counterweight to the uni-civilizational, notably European, bias built into a constitutionalist reading of existing and emergent international law. Reimagining global constitutionalism as a heuristic (or perhaps even hermeneutic) device offers us a response to the new generation of deniers of international law and legitimacy as well as the democratic deficit skeptics (Peters 2009). Powerful as these critiques are, we should not allow their importance to deflect us from paths that may lead to more robust and democratic forms of global governance.
Appendix I

The Countries of Eastern Terra:
Geography, Politics, and People

TERRA

Geography
The continent of Terra comprises 6,356,863 square miles, roughly twice the size of Australia. Like Australia, much of Terra is desert. The southern most quarter of the island is made up of a heavily forested range of mountains that are volcanic in origin. The south slope of the Southern Mountains faces into the prevailing winds, creating a rain shield that deprives the northern half of the continent of significant precipitation.

Between the Southern Mountains and the Northern Desert there lies a relatively fertile plain, watered by mountain runoff and the occasional showers that manage to clear the peaks to the south. The other major feature of the continent is the Terra River. The headwaters of the Terra are high in the Southern Mountains. From there the river runs first north and then west, nearly bisecting the continent. It reaches the ocean near the northern end of the continent’s western coast. The areas immediately surrounding the Terra are the only areas of the Northern Desert (aside from the coastal strip around the mouth of the Terra) that will sustain agricultural activity and most of that region’s sparse population lives within walking distance of the river banks.

History
Until nearly the middle of the 19th century, the Terran continent was dominated by two competing colonial powers. The eastern half of the continent (roughly speaking) gained its independence in 1832 when the colonial power ceded its sovereignty as a result of its own internal instability and growing pressures for autonomy in its far-flung colonial possessions. The newly independent country took the name Panterra, in recognition of the fact that its territory included the entire eastern bank, approximately one sixth of the western bank, and the headwaters of the Terra River.

The western half of Terra had to win its independence by combination of revolution and patience. The western most part of this region contained nearly three quarters of the colonial population, which waged a three year battle against colonial rule from 1855-1858. At the end of this time, the southwest area of the continent gained its independence as the new nation of Westmare and the northwestern area along with the intervening desert region (north of the Terra River) was ceded by the colonial power to Panterra. The central and south-central areas of the continent continued as a relatively unimportant and largely neglected colonial possession for another half-century, gaining its independence in 1913 as growing
tensions in Europe led its colonial master to divest itself of its overseas possessions.

In surrendering sovereignty over the sparsely populated central and south-central area of the continent, the former owner created two small states, roughly contiguous with the territories of the area’s two major ethnic groups but with boundaries that were largely arbitrary. The southern area now constitutes the nation of Meerland, which consists of a rugged southern ocean-front (with only a small population in a few fishing villages) and a fertile highlands area in the north (home to four fifths of the country’s population). The region to the north of Meerland is now the landlocked nation of Arroya, which is entirely desert. Virtually all of Arroya’s population lives in the narrow fertile strip along the western bank of the Terra River (which is Arroya’s northern and eastern border with Panterra).

MEERLAND

Meerland is bordered to the east by Panterra, to the north by Arroya, to the west by Westmare, and to the south by the ocean. Meerland is a country dominated by mountains. The southern third of the country, which includes its entire coastline, is comprised of a densely forested range of volcanic peaks. Only scattered fishing villages dot the coastline and the mountains themselves are virtually uninhabited. To the north of the mountains there is a vast expanse of rolling hills and plains, watered by mountain runoff and occasional winter showers. There is a small arid region in the far north, adjacent to Arroya. In this area the border shared by Meerland and Panterra touches the Terra River. There is also considerable geothermal activity in this area, which the Meerland government has recently begun to exploit for the generation of electricity. Meerland’s government is stable and democratic. Its population is relatively homogeneous, comprising a single ethnic group whose members tend to identify with local village life and who have, since achieving independence in 1913, taken a growing pride in their national identity. The Meerland constitution establishes a congressional system of government, with a popularly elected president serving one six-year term. Extraordinary majority requirements in both houses of Congress have promoted a consensus-oriented politics that has produced steady consolidation of the federal system without depriving the country’s townships of their valued sense of self-determination. A statistical profile of Meerland appears below:

Land. Area: 886,700 sq. mi. (2,296,500 sq. km.); Capital: Kingston (population 426,657).

People. Population: 1,680,000; Density: 1.9/ sq. mi. (0.73/sq. km.); Distribution: 74% rural, 26% urban; Annual growth: 2.1%.

Education. Adult Literacy: 90%; Universities: 5.


Economy. GNP: $19.3 billion, $1,200 per capita; Labor distribution: agriculture-40%, services-21%, government-15%, commerce-12%, manufacturing-12%; Trade: Imports: $74 million, Exports: $64 million; principal trade partners-Pantaro, Westmare.

Government. Type: Republic; Legislature: Congress; Political subdivisions: 142 townships.

Communications. Railroads: none; Roads: 81,000 miles (130,350 kilometers); Major ports: 0; Major airfields: 2.
Meerland has recently undertaken two major development projects. The first exploits the geothermal resources of the country’s north eastern region for the generation of electricity. The current electrical usage within the country is small. But electric generation, which had been limited due to the expense of importing oil shipped by pipeline from the eastern coast of Panterra, is growing as geothermal sources come on line. The second project, in its earliest stages, involves the development of a port facility in the southern coast’s only shelter anchorage. The objective is not to increase shipping capacity, since there is little population or economic activity in the area. The goal is to develop a resort destination and a base for the promotion of environmental tourism.

ARROYA

Arroya is entirely landlocked. It is bordered on the east and north by Panterra, on the west by Westmare, and on the south by Meerland. This former colonial possession is the poorest nation on the Terran continent. Its territory is almost entirely desert. Only the strip of irrigated land along the Terra River supports agriculture. It also supports the vast majority of Arroya’s citizens. The remainder of the country is home only to herdsman and miners. Arroya is a republic, with eight semi-autonomous states. Each state is a homeland to one of the tribes which comprise the ethnic group whose distinctive culture led to the creation of the state by its former colonial master. The central government serves relatively limited functions, largely involving the mediation of disputes between the tribal states who control the country’s national assembly. In this, the government enjoys reasonable success. Crime and civil unrest are only limited problems. Political parties are unknown and the country has neither a military nor a regulatory establishment in the conventional sense. Arroya generally limits its foreign interactions to those required to maintain relations with its immediate neighbors. A statistical profile of Arroya appears below:

**Land.** Area: 674,133 sq. mi. (1,746,000 sq. km); *Capital:* Rivertown (population 876,657).

**People.** *Population:* 3,300,000; *Density:* 4.9/ sq. mi. (1.9/sq. km); *Distribution:* 19% urban, 81% rural; *Annual growth:* 3.7%.

**Education.** Adult Literacy: 38%; Universities: 1.

**Health.** Hospital Beds: 6,201; Physicians: 339; Life Expectancy: women-59, men-51; Infant mortality; 69/1,000 live births.

**Economy.** GNP: $920 million, $920 per capita; *Labor distribution:* agriculture-80%, construction/trade/transport-7%, government-5%, industrial/mining- 3%; Trade: *Imports:* $74 million, *Exports:* $64 million; principal trade partners-Pantaro, Westmare.

**Government.** Type:Republic; *Legislature:* National Assembly; *Political subdivisions:* 8 states.

**Communications.** Railroads: 1,332 miles (2102 kilometers); Roads: 27,693 miles (45,000 kilometers); *Major ports:* 0; *Major airfields:* 1.

Arroya has an economy based largely on agriculture made possible by ditch irrigation from the Terra River. The country imports virtually all of its manufactured goods. Its principal exports are small quantities of various ores mined in the northern half of the country and sold
principally to Panterra. There is also a small trade in wool across the Westmare and Panterra borders, but the size of this market can only be estimated because it is a largely informal activity carried on between the indigenous peoples of the two countries. Arroya is, by a small margin, a net importer of foods. These imports are principally meat products. The Arroyan population’s major protein source is the Terra River Salmon which has historically spawned in the middle third of the River’s length, just downstream of the rapids that mark its descent from the Meerland plains.

These economic activities have been essentially static since Arroyan independence in 1913. A few development activities have been pursued by international agencies. But the occasional indifference of Arroya’s tradition-oriented population, disunity among its tribal states, and limited domestic governmental capacity has hampered these efforts.

**PANTERRA**

Panterra is the largest and by far the most populous country on the Terran continent. The country stretches from the rugged southern coast, across the eastern third of the Southern Mountains, on to the extreme northern coast of the continent and west across the Northern Desert to the Western Sea. Its official name is the Federated Republic of Panterra, though its twenty-six provincial governments are little more than administrative regions under central authority. The country enjoys stable and representative government in the form a parliamentary system, including three major parties and several minor ones. It has a respectable record in the area of human rights, but its environmental protection performance is mixed. The country has never participated in a major military operation, is part of no military alliances, and maintains only a small armed force. In its international relations, Panterra is a firm and long-time advocate of free trade. A statistical profile of Panterra appears below:

**Land.**  *Area:* 3,285,619 sq. mi. (8,511,965 sq. km); *Capital:* Bay City (population 1,576,657).

**People.**  *Population:* 150,400,000; *Density:* 45.8/ sq. mi. (17.7/sq. km); *Distribution:* 74% urban, 26% rural; *Annual growth:* 2.1%.

**Education.**  *Adult Literacy:* 91%; *Universities:* 88.

**Health.**  *Hospital Beds:* 501,660; *Physicians:* 198,329; *Life Expectancy:* women-69, men-65; *Infant mortality:* 67/1,000 live births.

**Economy.**  *GNP:* $352 billion, $2,440 per capita; Labor distribution: agriculture-35%, services-40%, industrial-25%; *Trade:* Imports $26.6 billion, Exports $ 16.2 billion; principal trade partners-United States, European Community, Westmare.

**Government.**  *Type:* Federated Republic; *Legislature:* Parliamentary; *Political subdivisions:* 26 provinces.

**Communications.**  *Railroads:* 18,505 miles (29,871 kilometers); *Roads:* 889,745 miles (1,448,000 kilometers); *Major ports:* 11; *Major airfields:* 24.

Panterra has a large and diverse economy that supports the continent’s highest standard of living. Its major exports are natural resources. Exports include timber (28% of total exports), iron ore (25%), machinery and vehicles (13%), coffee (12%), sugar (10%) chemicals (9%), agricultural products (8%), rare minerals and gems (5%). Panterra’s major
import is oil. The country has only small reserves of oil and imports 60% of its domestic consumption. This is the major reason for the country’s trade deficit and its status as one of the world’s largest debtor nations, in spite of its relatively healthy economy.

In order to reduce its reliance on foreign oil, as well as to improve the air quality in its capital of Bay City, Panterra has undertaken a major effort to exploit the geothermal resources near its border with Meerland. This area, lying north of the Southern Mountains and along the Terra River, has great potential for the generation of electricity. Panterra’s Interior Ministry has, with the help of international lending agencies, established several power stations. These stations now generate more than half of the electricity used in the capital, which is also Panterra’s largest city.

This new source of power has also allowed for the creation of an industrial park to the west of the capital as well as a successful electrification project for the nation’s central highland agricultural region. Most significantly, Panterra has been able to reduce its reliance on foreign oil from 80% five years ago to 50% today while its economy has grown by 9% during the same time.
Appendix II

Petition One
The Republic of Arroya
versus
The Federated Republic of Panterra
and
The Republic of Meerland

Facts of the Case

The parties agree that the following facts are accurate:
1. The residents of the Republic of Arroya (Arroya) living in the vicinity of the Terra River rely on the Terra River Salmon fishery for approximately 80% of the protein in their daily diet.
2. Throughout the recorded history of the Arroyan people, the Terra River Salmon have spawned in the area immediately downstream of the Terra Rapids near the border between Arroya and the Republic of Meerland (Meerland).
3. In 1993, the Federated Republic of Panterra (Panterra) began to develop geothermal electrical generating facilities on its own territory near the Terra River and its borders with Meerland and Arroya. In 1999, Meerland also began to produce geothermal electricity on its territory and to discharge water in areas that ultimately drain into the Terra River.
4. The geothermal facilities throughout this area discharge large quantities of water into the Terra River. Even when this water is held in catchments and allowed to reach the ambient air temperature, it is still significantly warmer than the water of the Terra River.
5. Beginning in 1994, measurable increases in the temperature of the Terra River were detected below the Terra Falls in the area of the Salmon spawning grounds. These temperature increases have continued since 1994 and, by 2006, the Terra River was without salmon across 4/5ths of its length on the Arroyan border.
6. If temperature increases continue, wildlife biologists are unanimous in their view that the salmon spawning grounds will continue to shift downstream and that there will be no salmon in the Arroyan segment of the Terra River within five to ten years.
7. The parties also share the view that if increases in ambient river water temperature levels could be limited to no more than 0.5 C, salmon would likely return to the Terra River along all of its Arroyan segment. Limiting increases in ambient river water temperature to no more than 0.5 C would require a 60% reduction in geothermal production of electricity, given no changes in currently available technology. Further, the parties agree that no technological innovations that would allow for reductions in river water temperature without reducing electrical production are currently available or foreseeable in the future.

Petition (Arroya)
The Republic of Arroya petitions the panel for an order directing the Federated Republic of Panterra and the Republic of Meerland to reduce their geothermal electrical production by 60% from 2006 levels and to refrain from exceeding that limit in the future. Additionally, the Arroyan petition asks that the Court retain jurisdiction for an indefinite period of time. Arroya argues that it should be allowed to reserve the right to develop geothermal resources equivalent to those of Panterra and Meerland (on a proportionate per capita basis) and that the court should use its retained jurisdiction to mandate further reductions in Panterran and Meerlandan production to accommodate Arroyan development as it may occur.

Cross-petition (Panterra)

Panterra opposes the Arroyan petition in its entirety and, in a cross-petition, requests that the panel require all parties to return their geothermal electricity production to 2001 levels (which all parties agree would constitute an overall 60% reduction). This remedial measure would, Panterra accurately contends, impose a roughly equal financial loss on both Panterra and Meerland in terms of the total value of the infrastructure investment that would have to be decommissioned.

Cross-petition (Meerland)

In a cross-petition of its own, Meerland petitions the panel to mandate a 70% reduction in Panterran geothermal production and that Meerland be allowed to increase its geothermal production by an amount equivalent to 10% of current Panterran production (thus meeting the 60% overall objective). This would allow Meerland to approach a level of geothermal electrical production that would be equivalent (as a percentage of its total electrical production) to the Panterran electrical production profile. This increase in Meerland’s electrical production would allow it to meet its other economic development objectives.

Meerland vigorously objects to the Panterran remedial proposal on the grounds that 70% of its production facilities have been constructed since 2001 whereas only 15% of Panterra's much more extensive production capacity has been built during that time. As a factual matter, the Meerland argument is accurate in its description of the history of geothermal development in the Panterran/Meerland region and the implications of the Panterran proposal.

Charge to the Panel

The task for your panel is to arrive at a resolution of the dispute described above that you can agree is just. You may incorporate any of the arguments presented above in your judgment or develop solutions and rationale of your own. After rendering your judgment, you are requested to provide a concise general statement of the reasons for your ruling.
Facts of the Case

1. The central and northern regions of Meerland, north of the southern mountains, comprise some of the most productive agricultural regions of the Terran continent. Agricultural production in this area constitutes 40% of the Meerland economy.

2. In addition to satisfying virtually all of Meerland’s food requirements (the remainder consisting of fishing along the southern coast), this agricultural production also allows Meerland to export food in quantities sufficient to maintain a positive balance of trade that has contributed to its long-term economic stability.

3. Meerland’s success in agricultural production is due to two major factors. First are the favorable climate and soil conditions in the region north of its mountains. Second, the country’s farmers have achieved unusually high levels of productivity through a combination of careful land management and the aggressive use of chemical fertilizers and pesticides. These chemicals are almost entirely imported from neighboring Panterra.

4. Imports of agricultural chemicals into Meerland are conducted entirely by private companies (manufactures and retailers) and local farm cooperatives. Neither government has intervened in this activity beyond the granting of business operating licenses that are typical in other economic sectors.

5. Over the years, concern has grown within Meerland’s increasingly influential environmental movement that the long-term effects of the country’s significant and increasing use of agricultural chemicals. Environmentalists point out that the use of these chemicals within their country of origin (Panterra) is far more carefully regulated than it is in Meerland. Standards for record-keeping, limits on application levels, and safety rules for handling and disposal are both demanding and strictly enforced in Panterra. These requirements are built into a rigorous licensing regime that covers the entire life-cycle of agricultural chemical and their use within Panterra’s boundaries.

6. Between the pressure brought on Meerland’s government by the environmental movement and the long-standing hostility toward Panterra among Meerland’s political conservatives, the current “hands-off” attitude toward the importation of agricultural chemicals has become untenable.

7. However, this odd coalition of political forces cannot agree on a policy that it wants its government to pursue. Environmentalists want a strict regulatory regime similar to that in existence in Panterra. Conservatives want to confront the Panterran government on the issue, but they instinctively rebel at the idea of adopting a strict regulatory regime. They do not want to see so intrusive a level of government intervention in the economy. Moreover, they do not want to pay for the creation of an entirely new regulatory agency within the Meerland government. All sides agree that the government currently lacks the expertise and the resources that would be required to implement a regulatory system that would approximate that of Panterra. The government, however, believes that it has come up with an approach that will satisfy both of these constituencies and produce the level of environmental protection that citizens of Panterra enjoy.

8. Some of the chemicals Meerland imports are actually banned in Panterra, either entirely or for
particular uses. In fact, a few of the chemicals in question have been developed entirely for use in the crop and pest conditions in Meerland and are of no value in any other market. Moreover, Panterra declines to require complete disclosure of all scientific information about chemicals that its manufacturers export, citing patent protection concerns and the business confidentiality and nondisclosure requirements of this highly competitive industry.

Petition

The Republic of Meerland petitions the International Court of Justice for an order directing the Federated Republic of Panterra to prohibit any and all trade in agricultural chemicals between individuals, groups, or corporations within its borders and those within the borders of Meerland that would not be licensed to engage in the production, distribution, use, or disposal of those chemicals in Panterra. In effect, the government of Meerland is asking the Court to require Panterra to extend its regulatory jurisdiction and enforcement procedures to parties within Meerland. Meerland argues that Panterra is best equipped to license handlers of agricultural chemicals and pledges to conform its business licensing actions to licensing decisions made by Panterran regulators.

Response

In response to the Meerlandan petition, Panterra makes the following arguments: First, that the trade in chemicals between Meerland and Panterra is conducted by private individuals who are violating no Panterran law. Second, that trade in agricultural chemicals between the two countries is free and produces reciprocal benefits. Third, that Meerland is better situated to regulate its own citizens. And, finally, Panterra argues that it should not be required to bear the financial burden of extending its regulatory jurisdiction to activities by private individuals in Meerland.

As an alternative to Meerland’s petition, Panterra proposes a system of “prior informed consent” (PIC). Under a PIC system, Panterra would inform Meerland of proposed exports of chemicals to that country in advance, their quantities and primary characteristics, and the necessary steps for their safe handling. Meerland would also be informed of the identity of the exporting entities and the schedules of proposed shipments. Meerland could then grant or withhold its consent for each shipment.

Charge to the Panel

The task for your panel is to arrive at a resolution of the dispute described above that you can agree is just. You may incorporate any of the arguments presented above in your judgment or develop solutions and rationale of your own. After rendering your judgment, you are requested to provide a concise general statement of the reasons for your ruling.
Petition Three

The Republic of Arroya

versus

The Federated Republic of Meerland

Facts of the Case

The parties agree that the following facts are accurate:

1. The central and northern regions of Meerland, north of the southern mountains, comprise some of the most productive agricultural regions of the Terran continent. Agricultural production constitutes 40% of the Meerland economy.

2. In addition to satisfying virtually all of Meerland’s food requirements (the remainder consisting of fishing along the southern coast), this agricultural production also allows Meerland to export food in quantities sufficient to maintain a positive balance of trade that has contributed to its economic stability.

3. Meerland’s success in agricultural production is due to two major factors. First are the favorable climate and soil conditions in the region north of its mountains. Second, the country’s farmers have achieved unusually high levels of productivity through a combination of careful land management and the aggressive use of chemical fertilizers and pesticides.

4. The western half of Meerland’s agricultural region drains into small creeks and streams which, as they flow north into lower and dryer regions, dissipate as a result of evaporation. No more than ten percent of these minor waterways reach Meerland’s northern border with Arroya.

5. However, the western half of Meerland’s agricultural region is characterized by wetter conditions and the terrain is steeper, resulting in more rapid run off. And this area drains into the Terra River watershed. Since Meerland began keeping records of chemical concentrations along its small stretch of riverbank in 1969, concentrations of organic pollutants (residue from the extensive use of fertilizers) have increased dramatically. By 1985, levels of these substances had risen to the point that significant levels of eutrophication (oxygen deprivation) were causing seasonal die-offs of Terran River Salmon in the southern regions of Arroya. The problem has grown since that time to the point that the Terran River is devoid of fish through the southern most quarter of its Arroyan course.

6. The adjacent south-eastern area of Arroya is, for climatic reasons, the most productive agricultural region of that country. The government has been trying to encourage greater agricultural productivity in this area, both to secure the nation’s food supply and to generate export food products to help solve the country’s persistent balance of trade problems. Part of this effort has been the creation of government subsidies that encourage both the development of new ditch irrigation systems and the use of organic fertilizers, both naturally occurring and artificial.

7. However, Arroyan agricultural production has now begun to contribute to the eutrophication problem in the Terra River. While there is some uncertainty due to a lack of technical expertise in Arroyan government agencies, the country’s contribution
to the decline in water quality in the Terra has been estimated by international environmental organizations to be roughly one tenth that of Meerland’s.

8. All parties agree that a reduction in organic runoff in Meerland to levels observed in 1980 would allow fish to return to the Terran River at least as far south as the Arroya/Meerland border (assuming no other sources of pollution are added).

Petition

The Republic of Arroya petitions the International Court of Justice for an order directing the Republic of Meerland to prohibit by statute the use within its territory of organic fertilizers, both artificial and naturally occurring, to 90% of the levels reported in 1980. That prohibition would allow for an approximate doubling of runoff from Arroyan sources, an allowance that Arroya contends would allow it to complete its planned expansion of agricultural production in south-eastern Arroya. Arroya’s contribution of pollutants into the Terra River would still be less than one-quarter the quantity of those contributed by Meerland, despite the fact that Arroya has twice Meerland’s population and over one-thousand times its river frontage.

Response

In response to the Arroyan petition, Meerland makes the following arguments: First, that outright prohibitions of the use of chemical fertilizers are inefficient as a means of controlling pollution because they do not take into account the costs and benefits of the policy. Second, that Meerland’s farm community should not be required to sacrifice more than farmers in Arroya to protect Terra River water quality. And, finally, that use by Meerland of fertilizers in the Terra River watershed has continued unchallenged over so long a course of time that it has created an established right to that beneficial use of the resources in that territory.

As an alternative to Arroya’s petition, Meerland claims the prior use right to the assimilative capacity of the river up to its 1980 levels of nutrient runoff, but only if Arroya also limits runoff to its own 1980 levels. Meerland proposes to use a permit system to reduce its nutrient runoff over time to 1980 levels by allocating tradable permits at no cost to current Meerland farmers. It proposes to allow Arroya (or Arroyan citizens) to purchase these permits in the open market it will establish for their sale at whatever price the market will bear.

Charge to the Panel

The task for your panel is to arrive at a resolution of the dispute described above that you can agree is just. You may incorporate any of the arguments presented above in your judgment or develop solutions and rationale of your own. After rendering your judgment, you are requested to provide a concise general statement of the reasons for your ruling.
References


