

Global Governance of Natural Resources: Quantity vs. Quality

Nancy McCarthy
LEAD Analytics

Dan Sapienza
LEAD Analytics

Leslie Lipper
Food and Agriculture Organization of the UN



LEAD ANALYTICS, INC.
Law, Economics & Agriculture for Development

Existing Global Governance Structures

- A search of EcoLex:
 - 476 treaties and agreements covering fisheries
 - 275 on water
 - 218 on wild species and ecosystems
 - 201 on waste and pollution
 - 71 on land and soil
 - 59 on forestry
- Int'l Environmental Agreements Database project (U. Oregon) count nearly 3,371 treaties, agreements and “non-agreements”, in total.
- More than 5,000 active Intergovernmental Organizations (IGOs) on all issues (not natural resource-specific)
- In 2004, around the world there were 153 International River Basin Institutions dealing with transboundary rivers.

Why Global or Multilateral Governance?

- Externalities occurring at supra-national scales; positive or negative, either due to resource use and management itself, or as by-products of other activities
- Nature of the externality determines “membership” for collective action, benefits to collective action and the incentives to cheat (affecting costs)

Externalities	Air	Fisheries	Plant Genetic Resources	Water Basins	Forests	Grasslands	Soil
Global	GHG Emissions, Ozone Depleting Substance	Oceans: Overfishing	Information encapsulated in seeds	Ocean Pollution	GHG Emissions	GHG Emissions	GHG Emissions
Regional	NO, SO2, Mercury	Transboundary Rivers: Overfishing		Overexploitation, underprovision	Biodiversity, Wildlife, Water Regulation	Transboundary Grassland: Overgrazing	
National	NO, SO2, Mercury	Captive coastal fisheries: Overfishing		Overexploitation, underprovision	Biodiversity, Wildlife, Water Regulation	National Reserves: overgrazing	
Local	Particulate Matter	Local Lakes: Overfishing		Pollution, Sedimentation	Erosion Control, Water Regulation	Communal Pastures: Overgrazing	Erosion, Water Retention

Multilateral Governance Design Elements:

- Legally Binding or Non-Binding
- Precise versus Vague Language
- Degree of Centralization
- Implementation Functions
 - Provide Information/Coordination Platforms
 - Monitor Compliance
 - Provide Review and Dispute Resolution Mechanisms
 - Enforce

Legally Binding or Not?

- Credibility *ex ante* vs. Flexibility *ex post*
 - Legally binding preferred when potential for opportunism high, since signals credibility *ex ante*
 - Non-legally binding when flexibility is preferred due to uncertainty; e.g. uncertainty over future conditions
- Non-Legally Binding also more likely when
 - When parties to agreement differ substantially in terms of benefits and costs from status quo and from changes sought in agreement
 - Domestically, difficult to ensure ratification and implementing legislation
 - Where of low importance to domestic interest groups, hypothesis being that domestic interest groups favor legally binding instruments (credibility is more important)

Legally Binding or Not? Cont.

- But note that Legally Binding Instruments can be made more flexible through:
 - Explicitly providing for *ex post* adjustment mechanisms in the treaty
 - Using vague language, that leaves specifics of implementation to countries
 - Using language, where interpretation is negotiated in some centralized forum *ex post*, as needed

Precise vs. Vague Language?

– Benefits of Vague language:

- Gives flexibility for heterogeneous countries to implement “principles” of the agreement whilst still signing a legally binding agreement
- Allows for smoother adjustment in face of changing conditions as time goes on (no need to go through treaty amendment processes)
- Where credible/fair review and dispute resolution mechanisms can give effect to fuzzy language (make more precise) over time as uncertainties are resolved

Degree of Decentralization

- Optimal Devolution/Principles of Subsidiarity/Federated Structures
 - Devolve authority/responsibility to lowest level possible
 - Functions do not necessarily all need to be performed at single, centralized level
 - Use federated structures to improve monitoring and compliance (higher levels monitor sub-units, sub-units monitor individuals)
- Precautionary Note: Some fear MEAs will lead to “recentralization” after long-fought gains for decentralization, e.g. REDD+ focus at national level structures, may lead to recentralization of forest management

Implementation Functions: Provide Information

- Information Platforms
 - Often one of the easiest to negotiate and agree upon since involves provision of public good
 - Can be more difficult when relevant information is not in the public domain, e.g. patented technologies for reducing pollution; plant genetic resources (hence the International Treaty on Plant Genetic Resources)
 - Especially for developing countries with limited budgets, economies of scale in collecting, organizing relevant information can save a lot of resources
 - But, for diverse complex ecosystems, “global” platforms probably better complemented by regional platforms

Implementation Functions: Monitoring

- Joint Monitoring
 - More likely to have strong centralized monitoring structures where:
 - Economies of scale and/or scope in monitoring activities
 - High incentives for opportunism (non-compliance)
 - Even more important when agreement is non-binding
 - “Noise” in monitoring: when compliance not directly observable, centralization helps reduce conflicting “interpretations” of evidence

Implementation Functions: Review and Dispute Resolution Mechanisms

- Centralized Review and Dispute Resolution Mechanisms more likely where:
 - Complex subjects
 - High uncertainty between observed outcomes and compliance
 - Where treaty deliberately written with vague terms
 - Where reputation effects important for enforcement, these mechanisms can provide information seen as legitimate and fair

Implementation Functions: Enforcement

- Enforcement
 - Very Rare in MEAs
- Occurs mainly through Reputation Effects
 - Reputation effects amongst sovereigns for legally binding agreements appear strong enough to ensure compliance (with some exceptions, e.g. certain fisheries)
 - BUT, that is generally because they comply with relatively “weak” treaties
 - Reputation effects amongst sovereigns for non-legally binding agreements thought to be weaker
 - BUT, the agreements tend to have more substantial obligations
 - Strong reputation effects for individual agents who are obligated by treaty or by national legislation implementing agreements also help with enforcement

Global Fisheries

UN Convention on the Law of the Sea

- Legally Binding.
- Language:
 - Specific clauses include
 - Exclusive Economic Zones
 - Navigation Rights and Obligations
 - Pollution Prevention
 - Fuzzy standards for NRM
 - Largely left open to interpretation by signatories
 - But can bring claims to International Tribunal for LoS (but very few cases)

FAO Code of Conduct on International Fisheries

- Non-Legally Binding.
 - Intended to guide implementation of UNCLOS provisions relating to living marine resources, RFMO's
- Language: more specific than UNCLOS on NRM but still largely “principles”
 - To guide countries in drafting national legislation

Global Fisheries

UN Convention on the Law of the Sea

- Strong Structures
 - Platform for information, coordination,
 - Monitoring
 - Dispute resolution mechanism
 - Enforcement by nations
- Some federation (RFMOs)
- Effective?
 - EEZ's and Navigation: Very
 - Pollution: Moderate
 - Fisheries: Limited

FAO Code of Conduct on International Fisheries

- Relatively Weak Structures
 - Utilizes existing international bodies for coordinating activities, monitoring, and dispute resolution
 - No Enforcement
- Effective? Limited
 - Pitcher, et al. (2006) found near-universal noncompliance of key provisions
 - FAO's own monitoring found progress toward compliance.

Multilateral Fisheries

Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

- Legally binding treaty, not yet in force.
- Precise language, specifying obligations for both flag and non-flag states.
- Monitoring done by nations, with FAO review after number of years
- DRM through the International Tribunal for the Law of the Sea

Framework Convention for the Protection of the Marine Environment of the Caspian Sea, 2003

- Russia, Iran, Azerbaijan, Kazakhstan, and Turkmenistan. Vague language: “Increasing potential of living resources”, “Ensuring marine resources are not endangered by over-exploitation.” No mention of sturgeon.
- Monitoring is done at the national level, with the secretariat having little control
- The Convention has been largely ineffectual in preserving sturgeon populations

UN Non-Legally Binding Instrument on All Types of Forests

- Strong pressure for a treaty, but difficulty in determining what was “global” about forests
- Recognition of the wide diversity of forest, forest ecosystems, and the people dependent on them as a further difficulty to structuring global agreement
- Largely “aspirational” fuzzy language, e.g. commitment for sustainable management of forest resources at all levels: local, national, and global.
- Also emphasizes fact that better forest management in developing nations will required increased financial support from other nations.
- Weak Structures:
 - Information Platform: No
 - Joint Monitoring: No
 - Self Monitoring: Members may submit voluntary reports on compliance.
 - Review and Dispute Resolution Mechanisms: No

Forest Management

Central African Forests Commission - COMIFAC

- Legally Binding, but explicit clause stating *Voluntary Commitment* to sustainable use of forests
- Language: fuzzy standards for NRM
 - Explicitly leaves open to later discussions and negotiations
- Structures
 - Platform for coordinating activities
 - Federated Monitoring, implemented through Secretariat at the regional and national levels, coordination with NGOs, governments, private sector
 - No DRM, other than through forum for discussion and debate
- Effective? Too early, but commitment promising

COMIFAC Plan of Convergence, 2004

- Non-binding but laying out specific tasks and steps toward a convergence of regional forestry management protocols
- Language: fuzzy standards, but explicitly establishes strategic areas for future regional harmonization efforts
- Weak Structure, utilizes COMIFAC and existing NGOs to implement plan
 - But requires the establishment of regional monitoring structures

International Mechanisms that affect NRM

- Private sector forming voluntary guidelines to pre-empt development of legally binding regulations (land investments)
- Private sector entering voluntary markets, e.g. Voluntary Carbon Market
- Market-based mechanisms such as labelling/ certification
- Activities of International NGO's and CSO's
- Other development financing mechanisms, particularly in agriculture, forests and fisheries, e.g. CADDP

Concluding Comments

- Do we need More? Not Really...
 - Most NR's with global externalities are already subject to legally binding treaties
 - Many regional also subject to both binding and non-binding agreements
 - Some scope to include NR's not now covered

Concluding Comments

- Do we need Better? Yes!
 - Need to better understand how different design elements complement or substitute for each other
 - If non-binding for flexibility, then precise language or centralized monitoring for credibility
 - If vague language, then legally binding or centralized review and dispute resolution mechanisms
 - Need to better integrate lessons from principles of subsidiarity/federated structures
 - Even when externalities are wide in scale, certain functions may be better performed at lower levels
 - Or, the same function can be performed at multiple levels, feeding upwards

Thank You!



LEAD ANALYTICS, INC.
Law, Economics & Agriculture for Development

References

Devolution/Subsidiarity/Federated structures

- Bendor, J. and D. Mookherjee. 1987. Institutional Structure and the Logic of Ongoing Collective Action. *American Political Science Review*, 81(1): 129-153.
- Charnovitz, S. 2002. A World Environment Organization. *Columbia Journal of Environmental Law*.
- Meinzen-Dick, R., M. Di Gregorio, and S. Dohrn. 2008. Decentralization, Pro-Poor Land Policies, and Democratic Governance. CAPRI Working Paper 80. Washington, DC: IFPRI. 2008. <http://www.capri.cgiar.org/pdf/capriwp80.pdf>
- Ostrom, E. 2009. A Polycentric Approach for Coping with Climate Change. World Bank Policy Research Working Paper Series. Washington, DC: World Bank.
- Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*, 10th ed., New York: Cambridge University Press.
- Rodrik, D. 1997. Has Globalization Gone too Far?, Washington, DC: Institute for International Economics.

Legally Binding vs. Non-Legally Binding

- Köppel, M. 2009. The Effectiveness of Soft Law: First Insights from Comparing Legally Binding Agreements with Flexible Action Programs. *Georgetown International Environmental Law Review*, 21: 821-35.
- Victor, D.G. 1997. The Use and Effectiveness of Nonbinding Instruments in the Management of Complex International Environmental Problems. *American Society of International Law Proceedings*. 91: 234.
- Raustiala, K. and D.G. Victor. (1998) Conclusions. In: *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice*. D.G. Victor, K. Raustiala and E. B. Skolnikoff (eds.), pp. 659-708. Laxenburg Austria; Cambridge Mass.: International Institute for Applied Systems Analysis; MIT Press.

References

Precise vs. Vague Language

Abbott, Kenneth W, and Duncan Snidal. (2000) Hard and Soft Law in International Governance. *International Organization* 54: 421-56.

Fon, V. and F. Parisi. 2007. On the Optimal Specificity of Legal Rules. *Journal of Institutional Economics*, 3(2): 147-164.

Kaplow, L. 1992. Rules versus Standards, An Economic Analysis. *Duke Law Journal*, 42: 557-629.

McCarthy, N. 2010. When are Fuzzy Standards Preferred to Bright-Line Rules? Paper presented at the 14th Annual meetings of the International Society for New Institutional Economics, Sterling, Scotland; June 17-19.

References

Information and Coordination Platforms

Esty, D. and M. Ivanova. [2005. Globalization and Environmental Protection: A Global Governance Perspective](#). In: *A Handbook of Globalisation and Environmental Policy: Interventions of National Government in a Global Arena*. (Frank Wijen, Kees Zoeteman, and Jan Pieters eds.) Cheltenham: Edward Elgar, 2005.

Esty, Daniel C. and Maria H. Ivanova. 2006. "Global environmental governance: Options and opportunities." New Haven, [Conn.]: Yale School of Forestry & Environmental Studies.

Raustiala, K. 2005. Form and Substance in International Agreements. *The American Journal of International Law*. 99(3): 581-614.

Monitoring

Raustiala, K. 2005. Form and Substance in International Agreements. *The American Journal of International Law*. 99(3): 581-614.

Tir, J. and Stinnett, D. M. The Institutional Design of Riparian Treaties: The Role of River Issues. *Journal of Conflict Management*, available online, March 14, 2011.

Review and Dispute Resolution Mechanisms

Raustiala, K. 2005. Form and Substance in International Agreements. *The American Journal of International Law*. 99(3): 581-614.

Koremenos, B. 2007. If Only Half of International Agreements Have Dispute Resolution Provisions, Which Half Needs Explaining? *Journal of Legal Studies*, 36: 189-.

Koremenos, Barbara, Charles Lipson, and Duncan Snidal. (2004) *The Rational Design of International Institutions*. Cambridge, UK New York: Cambridge University Press.

References

Case Study Materials

UNCLOS and FAO Code of Conduct

Pitcher, Tony, et al. (2006). Evaluations of Compliance with the FAO (UN) Code of Conduct for Responsible Fisheries. Fisheries Centre Research Reports 14(2).

Pitcher, Tony, et al. (2008). Safe Conduct? Twelve Years Fishing under the UN Code. WWF, December 2008.

Framework Convention for the Protection of the Marine Environment of the Caspian Sea

Framework Convention for the Protection of the Marine Environment of the Caspian Sea, available at:

<http://www.caspianenvironment.org/newsite/Convention-FrameworkConventionText.htm>

UNDP. (2004). The Caspian Sea: Restoring Depleted Fisheries and Consolidation of a Permanent Regional Environmental Governance Framework. Available at:

[http://www.caspianenvironment.org/newsite/DocCenter/Reports/2009/CASPECO%20Prodoc%20amended%20.English%20\(21.%201.%2009\).doc](http://www.caspianenvironment.org/newsite/DocCenter/Reports/2009/CASPECO%20Prodoc%20amended%20.English%20(21.%201.%2009).doc)

Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

UN (FAO). Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, available at:

<http://www.fao.org/Legal/treaties/037t-e.pdf>

Central African Forests Commission – COMIFAC

Wan, K. (2009). Global Sustainable Development — From Above and Local Injustice Below: The Governance Challenge Facing the Congo Basin Rainforest, 2009 (1) Law, Social Justice & Global Development Journal (LGD). http://www.go.warwick.ac.uk/elj/lgd/2009_1/wan

Morrison, Karl. (2007). Legality Standards and Stepwise Approaches to Sustainable Forest Management in Central Africa: Challenges of Coordination and Communication. WRI Forest Note. World Resources Institute.

Treaty on the Conservation and Sustainable Management of Forest Ecosystems in Central Africa and to Establish the Central African Forests Commission (COMIFAC)', 2/1 Law, Environment and

Development Journal (2006), p. 145, available at <http://www.lead-journal.org/content/06145.pdf>

Convergence Plan for the Conservation and Sustainable Management of Forest Ecosystems in Central Africa. COMIFAC, 27 May 2004.

References

Case Study Materials

UN Non-Legally Binding Instrument on All Types of Forests

United Nations Forum on Forests. (2011). Assessment of progress made on the implementation of the non-legally binding instrument on all types of forests and towards the achievement of the four global objectives on forests. Report of the Secretary-General.

Mekong River Basin Agreement

Broader Empirical Evidence

Bernauer, Thomas, et al. (2010). On Commitment Levels and Compliance Mechanisms – Determinants of Participation in Global Environmental Agreements. Center for European, Governance and Economic Development Research. Number 94.

Sandford, Rosemary. (1994). 'International Environmental Treaty Secretariats: Stage-Hands or Actors?', in Helge Ole Bergesen and Georg Parmann (eds.), Green Globe Yearbook of International Co-operation on Environment and Development 1994 (Oxford: Oxford University Press), 17–29.

Schmeir, Susanne. (2010). Governing International Watercourses – Perspectives from Different Disciplines: A Comprehensive Literature Review. Hertie School of Governance Working Papers, No. 53, August 2010.