International Lending Agencies and Regional Environmental Cooperation in the Black and Caspian Sea

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Why has a regime of environmental cooperation formed in the Black Sea, whereas the Caspian Sea region has a minimally manageable environmental agreement states? Why do states choose to join environmental regimes? What roles do international lending agencies and aid projects play in the domestic decision makers choice to join cooperative regimes? This paper seeks to address this question by examining the environmental regime formation in the Black and Caspian Sea regions. Specifically the issue of environmental aid and domestic level policy making will be examined as they relate to regime formation.

Management of a commonly held resource in an international setting often reveals the challenges that arise out of a lack of a single controlling mechanism such as the state. In the cases of the Black and Caspian Seas the development of international agreements to reduce pollutants and other anthropogenic deterioration is equitable to the management of many other collectively held commons. A great deal of theoretical work has been done examining the development and success of management of the commons. From Mancur Olson's seminal 1965 work The Logic of Collective Action: Public Goods and The Theory of Groups to Garrett Hardin's seminal article identifying "The Tragedy of the Commons"(1968) to the work of Elinor Ostrom, Robert Keohane, Oran Young, Robert Putnam, Peter Haas and others, the issue of managing consumption of a jointly held

resources has provided challenges to researchers at the empirical level as well as at more theoretical levels.

This paper examines the role of incentives, including perceived incentives to domestic policy makers as they consider joining an international environmental regime. The cases of the Black and Caspian Seas are especially well suited for this study given their similarly developing status, need for environmental cooperation to manage near catastrophic deterioration of commonly held waters and the economic challenges facing these states. Additionally, the economic inducements provided to these regions alternately provide strong incentives towards cooperation, while there are also competing factions that would argue strongly against cooperation among these states. The objective of this work is to demonstrate that economic incentives induce action towards cooperation through regime formation, even though it may not necessarily do so as intended by the international lending organizations.

The environments of the Black and Caspian Seas are some of the most polluted in the world. Domination of these waters, and many of the catchment areas and river basins during the 20th Century by the Soviet Union has left the ecologies of these seas precipitously on the edge of survival.(Darst 1997, Pryde 1995, Cognetti 1997, Dumont 1995, Mee 1992, Ozturk et al. 1997) Dangerously high levels of heavy metals, petroleum industry run-off, agricultural and industrial effluents, sewage and municipal wastes plague both of these seas. Yet in the Black Sea the riparian states were able to reach agreements towards cooperation with relative ease, culminating in the signing of the Bucharest Convention in 1993 and its subsequent ratification in early 1994, which gave legitimacy and support to the United Nations Regional Seas Programme Black Sea Environmental Programme. The mission of this Programme is to coordinate efforts of all Black Sea states to reduce further anthropogenic degradation. The Caspian Sea states however have not been able to reach formal agreements on the management of the environment of the Caspian. The questions they face include whether it is a lake or a sea by legal definition, who has rights to the oil fields beneath the sea bed, how will profits from oil be divided and which route will be favored for transportation of this oil to the world markets. These problems prevent these states from cooperating and often concern for the environment is touted as a means to prevent other states exploitation of resources. While it may initially appear that

the presence or absence of oil makes the case of the Caspian incomparable to the Black Sea, it is a factor that is strongly influencing both regions. This will be discussed in detail in subsequent sections of the paper. Before delving into these specifics it is important to set the theoretical stage on which these various plays take place.

ON COLLECTIVE ACTION

These include collective action, fallacy of composition, free-riding, public goods, common pool resources, selective incentives, and entrepreneurs in latent groups. Finally, the issue of what induces members of a community to choose collective action will be addressed in light of earlier concepts defined above, combined to employ Olson's by-product theory. Prior to the work of Mancur Olson it was assumed that groups with a commonly held interest would work together to pursue this interest. Noted social scientist such as James Madison (1787), Karl Marx(1933), Arthur Bentley(1949) and David Truman(1958) all assumed that once groups recognized their mutually held interest, they would work together through coordinated efforts to protect and advance these interests. This assumption was challenged by the work of Mancur Olson in The Logic of Collective Action (1965) in which he states that "Indeed, unless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, *rational, self-interested individuals will not act to achieve their common or group interests*."(1965, p.2, emphasis in original) Hence, unless there is some additional benefit, collective action will not occur. Yet in some cases collective action obviously does occur and in others it clearly does not even though it seems that it is warranted.

This leads to what is know as the "fallacy of composition". This assumption is "that is an action is in the collective interest of a group and if members of the group are rational, then the group must be (in the same sense) collectively rational, which is to say that the group must act in its interest just as each of its rational members would do."(Hardin, 1982, p.2) It is understood that fallacy of composition is what drive the underprovision of public goods and common pool resources. Olson defines a public good as "any such good that, if any person X1, . . ., Xi,. . . , Xn consumes it, it cannot be feasibly withheld from others in the group."(Olson, 1965, p. 14) Hence the development of an institutional structure which

supports cooperative environmental stewardship would qualify as a public good, once it is agreed that this is a common goal of participants.

On the other hand, there is a similar problem when it comes to a problem of a commonly held good as defined by Garrett Hardin in his 1968 article on the tragedy of the commons. Hardin creates an imaginary situation in which a pasture is available to all members of a community. “As a rational being, each herdsman seeks to maximize his gain... he asks ‘What is the utility to me of adding one more animal to my herd?’ This utility has one negative and one positive component. (1.) The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1. (2.) The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsmen, the negative utility for any particular decision-making herdsman is only a fraction of -1. Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another But this is the conclusion reached by each and every rational herdsman sharing the commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit - in a world that is limited.”(Hardin, 1968, p.1244)

Because each member of the littoral states of the Black and Caspian Seas will collectively suffer from environmental degradation of the seas and their shorelines, each has an incentive to reduce their own level of pollutants. Yet, because each state also recognizes that if they reduce their own pollution and other states do not, the over all costs may not equal the over all benefits of such an action. Hence the problem in each case is a classic collective action problem for public goods as delineated by Olson. Without the cooperation from other participants the benefits to the individual are limited. Simultaneously, the fishery stocks of the regional seas and the effect of both increased pollution levels and excessive over fishing makes the problems facing the littoral states equitable to a tragedy of the commons situation. Throughout this work, the nature of the seas will be discussed both in terms as a “CPR” (common pool resource) and as a public good. To clarify this distinction it is important to understand the basis which allows these two terms to be used somewhat interchangeable.

Keohane and Ostrom(1995) delineate these terms is regards to how they are being conceptualized. They suggest that is the *aspects* of a physical resource that determine whether it should be considered a CPR or a public good. They suggest that the "classic problem of public goods, which also afflicts CPR's, is underprovision."(*ibid*, p.13) They add that a CPR also has the added challenge of rivalry of consumption. The jointness of supply present in public goods does not exist in CPRs because there is a finiteness of exploitable supplies at a given time. Therefore while the use of the Black Sea, or the Caspian as a waste sink may make it a public good with relatively unlimited sink capacity for waste, the fishing stocks of the seas would be subjected to rivalry of consumption. In addition to this, Keohane and Ostrom point out that the CPR public good delineation falls along a continuum of Weberian ideal types. They suggest that "the key to the public goods-CPR distinction seems to be the abundance of a resource relative to the function that it performs."(*ibid*, p.15) In both cases collective action solutions are required to overcome the challenges faced in an anarchic systems such as the international communities surrounding the Black and Caspian Seas. The formation of a regime to develop institutional rules which will allow for communal management of these seas is of issue here, particularly what factors influence states to join these regimes to over come these collective action problems. The provision of either public goods or common pool resource will be referred to a collective good for the remainder of this section.

This issues leads to the theoretic model of the Prisoner's Dilemma which sets forth that as each individual, acting rationally, as Olson suggests, will seek to further his or her own objectives even if it leads to collectively sub-optimal outcomes. Taking the defection option while the other cooperates and hence pays a higher price is commonly known as free-riding. Elinor Ostrom (1990) refers to this "free riding problem" as a central challenge to over coming collective action problems. She argues that "Whenever one person can not be excluded from the benefits that others provide, each person is motivated not to contribute to the joint effort, but to free-ride on the efforts of others. If all participants choose to free-ride, the collective benefit will not be produced. The temptation to free-ride, however, may dominate the decision process, and thus all will end up where no one wanted to be. Alternatively, some may provide while others free-ride, leading to less than the optimal level of provision of the collective benefit."(Ostrom, 1990, p.6) Thus while it may

be ideal to work towards over coming a collective action problem, the incentives are often set to avoid these optimal outcomes. Without these problems being addressed cooperation in providing both public goods and maintaining common pool resources will not occur. The central question in this work is why will cooperation occur in some instances and not in other similar instances?

Using Russell Hardin's argument that collective action, complete with problems of free-riding, we can see that the problems faced are the result of a multiple person Prisoner's Dilemma game. He suggests that whether viewing an 2-person game or an N person game the incentives for cooperation and defection will be the same. He suggests that "whatever the rationales of the players in experimental Prisoner's Dilemmas, we can probably safely generalize from the 2 person results to n-person behavior in some respects. In particular, we can probably conclude that cooperativeness will not increase, others things being equal as n increased beyond 2."(Hardin, 1982, p.29) However, he suggests that in the real world players, even in n-player sized groups meet repetitively cooperation evolves simply on the basis of "Since your cooperation tomorrow may depend on my cooperation today, I have incentive to cooperate today."(Hardin, 1982, p.3)

This leads to a rather optimistic work <u>The Evolution of Cooperation</u> Robert Axelrod suggests that cooperation in prisoners dilemma type situation may occur more often than not, given that there are multiple iterations of the game rather than a single shot play in which players do not have an incentive to cooperate.(Axelrod,1984) According to Axelrod, in cases where players are aware that they will be confronting one another again in subsequent plays of the prisoner's dilemma they will be more likely to cooperate. He uses a model based on Tit-for-Tat in which each player has the option of reciprocating the other players tactic in the previous iterations of the game. Hence if the first player defects (free-rides) in the first game, the second player has this option to defect (free-ride) in the second game. Neither player knows what the other will do, but they have the chance of meeting again which will affect the choices in the current game. This knowledge of potentially meeting again is known as the discount parameter or the shadow of the future. Axelrod states that "this means that the importance of the next encounter between the same two individuals must be great enough to make defection an unprofitable strategy when the other player is provocable. It requires that the players have a large enough chance of meeting

again and that they do not discount the significance of their next meeting too greatly."(Axelrod, 1984, p.174)

The magnitude of the shadow of the future also plays an important role in the likelihood of cooperation. Axelrod illuminates this with the following: "When the future casts a large shadow as reflected in the high discount parameter of 90 percent, than it pays to cooperate with someone using TIT FOR TAT. And because of this, it pays to use TIT FOR TAT. And therefore with a large shadow, cooperation based on reciprocity is stable. The situation changes when the shadow is not so great. To see this, suppose the discount parameter were changed from 90 percent to 30 percent. This reduction might be die to a greater likelihood that the interaction will end soon, or to a greater preference for immediate benefits over delayed gratification, or any combination of these two factors."(Axelrod, 1984, pp.127-128) If players suspect that they will meet again they will be less likely to defect (free-ride) in the present knowing that this may induce the other player to defect (free-ride) in the future. But it depends on players knowing that they will be meeting again. On the other hand, "this prolonged interaction allows patters of cooperation which are based on reciprocity to be worth trying and allows them to become established."(Axelrod, 1984, p. 129)

Yet, even though reciprocity and cooperation are shown to be effected by the shadow of the future, the ability to get players to the table in the first place remains key. In cases when cooperation does not happen to provide a collective good, it is important to examine why, and what does induce cooperative behavior to begin with. Returning to the problems inherent in the fallacy of composition, the issue of why groups will or will not form to join the game of TIT FOR TAT becomes paramount.

Olson addresses this question of inducing cooperation by suggesting that there area several types of groups and that size does in fact matter. He asserts that large groups may not work together to produce a collective good, even when it is in their interest to do so. He argues that smaller groups will be more inclined to work together because though the costs are somewhat higher, the benefits are also less diffuse. In the case that larger groups do not form, it is due to the assertion that the larger the group, the smaller the fraction of total group benefit any person will receive. Additionally, the costs of organizing larger groups will be must higher than the cost of organizing smaller groups. Olson states "thus an

individual in a 'latent' group, by definition, cannot make a noticeable contribution to any group effort, and since no one in the group will react if he makes no contribution, he has no incentive to cooperate."(Olson, 1965, p.50) It is this issue of incentives then that becomes key to understanding why some groups choose to cooperate and some do not.

Mancur Olson addresses the issue of incentives to induce cooperation as well. He suggest that "only a *separate and 'selective' incentive* will stimulate a rational individual in a latent group to act in a group oriented way."(Olson, 1965, p.51) Olson further clarifies this by suggesting that selective incentives are defined "to be greater in value, in terms of each individual's preferences, than each individual's cost of the collective good."(Olson, 1965, p.51, fn 72) Olson provides the example of especially good deals on insurance for laborers who choose to join a union. While other collective benefits such as bargaining strength resulted from the growing numbers of members, the individual members primary benefit was the enjoyment of the selective incentive, specifically affordable insurance.

In offering positive inducements and selective incentives Olson shows that it is not expected that there are individuals in latent groups who will rationally choose to initiate cooperation. And yet, these latent groups do find a way to unite to overcome collective action problems. Olson's 1971 edition of The Logic of Collective Action includes an appendix written in response to others critiques of his 1965 edition. In this appendix he specifically addresses the question of who it is that initiates the cooperation in latent groups. Relying on work done on private organizations, Olson turns to the concept of the entrepreneur. This individual is "the successful entrepreneur in the large group case, then, is above all an innovator with selective incentives."(Olson, 1965/1971, p.177) Michael Taylor picks up on this theme in his 1987 work The Possibility of Cooperation when he suggests that the political entrepreneur will solve a collective action problem by changing "...individual preferences (or more general attitudes), or change beliefs (including expectations) or inject resources (very probably knowledge, or new technology, like guns) into the group so as to make its members' efforts more productive."(Taylor, 1987, p. 24) In the sense that an entrepreneur can inject resources, it need not be limited to knowledge but could be expanded to include low cost loans for environmental cooperation and technological assistance for various programs. Additionally, the changing of attitudes

would include attitudes towards information groups, such as epistemic communities by inducing cooperation.(Haas, 1989,1990; Adler and Haas, 1992)

One may be left to wonder if the selective incentive offered by an entrepreneur is not the primary reason for participation in the group, while the collective benefit is a secondary by-product. Hardin questions the "correlation ... between goals of many organizations and their members' desire for collective purposes when the organizations' resources for 'collective action' are a by-product of selective incentives for membership."(Hardin, 1982, p.123) He suggests that by-product theory, specifically addressed by Olson, is a relatively underexplored area of collective action studies.

Olson's by-product theory suggests that latent groups will in fact form and become active in cases in which there is a selective incentive provided in exchange for membership. Further, the collective good provided by the group, lobbyist groups as Olson suggests, is a secondary benefit to the rational individual in an active latent group. It is a by-product of the primarily preferred selective incentive to the rational individual. Olson suggests that the "only organizations that have the 'selective incentives' available are those that (1) have the authority and capacity to be coercive, or (2) have a source of positive inducements that they can offer the individual in a latent group."(Olson, 1965, p.133) These organizations that posses the positive inducements that are of primary interest here. In cases where there are coercive authorities with the power to induce cooperation, while interesting, are less effecting in understanding international environmental cooperation. This would imply a neo-realist approach to global environmental stewardship, which is not a particularly well suited match for the anarchic international environmental community. More on this will be discussed in the subsequent section on the international environmental community. Thus, the groups that can offer positive inducements may hold the greatest explanatory power here with regards to the choice of actors to join the collective organization.

Interestingly, Hardin remarks that "the most obvious weakness of the by-product theory, however, is that although it can make sense of contributions to an ongoing political organization, it does not seem to explain how it is that many groups come to be organized in the first place."(Hardin, 1982, p.34) Taylor echoes this concern, suggesting that while by-product theory may explain ongoing collective action it does not explain how these problems are initially overcome. It is worth noting that even recently, by-product theory has

been utilized to explain how environmental groups use selective incentives to maintain group membership. Robert Lowery states that he employs a reformulated version of by-product theory to "analyze the problem of sustained mobilization for collective action from the standpoint of group managers."(Lowery, 1997, p.308) Yet he does not in anyway address how these incentives or groups are formed in the first place. However, Hardin may provide a unique key for addressing this short-coming. He suggests that the issue of by-product theory not adequately explaining how these groups start in the first place "would not be a problem if it seemed that organization for selective benefit reasons preceded organizational pursuit of collective benefits."(Hardin, 1982, p.33) This study will argue that this is precisely what has happened in terms of the environmental cooperation in the Black and Caspian Sea regions. The organization for selective benefits, through entrepreneurial organizations, such as the World Bank and Global Environmental Facility, formed prior to the organizational pursuit of collective benefits in the Black and Caspian Sea regions.

When applied to the Black and Caspian Sea regions, this formula would suggest that the littoral states are confronted with a collective action problem in which it is irrational for any one state to act to improve the environment if no other members of the region are willing to, since they will bear the cost of the others free-riding on their actions, while taking the suckers pay-off of having to deal with the other states pollution. While the various aspects of these seas are either common pool resources or public goods, depending on which aspect we are speaking of, the problem of underprovision remains. However, while we may assume that the state leaders are rational individuals, cooperation has occurred in the Black Sea while it has been far more difficult to induce in the case of the Caspian Sea. By applying the logic of the shadow of the future it would seem that cooperation would be an inevitable choice, given that both the literal death of the seas from non-cooperation and the continued relationship among policy makers would enhance the cooperation option. However, given the large number of demands on these governments, these groups may have remained latent. Yet, as Olson and others demonstrate if selective incentives are provided to members of these groups by some entrepreneurial actor, cooperation may rationally occur. Further, the appeal of these selective incentive may induce members to cooperate in order to obtain the benefit of the incentives, while the cooperation may in fact be a by-product of these incentives being offered. The World Bank,

Global Environmental Facility, United Nation Development Programme, EU/Tacis and entrepreneurial other organizations combine to provide selective economic incentives to members of these regions, in order to produce the by-product of environmental cooperation.

Ostrom and Keohane provide a well conceptualized set of articles that discuss these issues. They assert that there is a functional relationship between formation of these regimes and the outcomes. However, while they suggest that intervening variables such as transaction costs, capability to communicate and capability to make credible commitments leads to incentives to cooperate, thus changing behavior and shifting outcomes they fail to clarify how these variables induce cooperation amongst actors in a collective action problem.

Perhaps most useful now in this vein of literature is Putnams "two-level games"(1988), in which he delineates how policy is made both at the state and international level simultaneously. Putnam asserts that the diplomats, or the chief negotiators are often concurrently playing at two different tables. The first table is the international negotiating table, while the second is the individual domestic table. These concurrent games both limit and provide expandable rule sets for the negotiator. While Keohane and Ostrom focus on the heterogeneity of various groups in CPR situations, Putnam focuses more specifically on the negotiator managing these groups. Putnam suggests that there are a series of conditions that allow the negotiator to maneuver within and among both domestically and internationally heterogeneous and homogeneous groups.

Putnam discusses these two level games simultaneously utilizing the statist approach of neo-realism and the neo-institutionalist approach of public choice theory. By combining these two he is able to draw out how international actors strategies may reflect domestic preferences and how domestic strategies may reflect international cooperative preferences. By examining the role of the win-sets, including the issue of size of domestic win-sets, degree of democratic pluralism or authoritarian totalitarianism Putnam asserts that these factors influence a states ability to join in a collective agreement. "All support for international agreements in smaller, more dependent countries with more open economies, as compared to more self-sufficient countries like the United States, for most of whose citizens the costs of non-agreement are generally lower."(Putnam, 1988, p.443) However,

Putnam later states that "the stronger the state is in terms of autonomy from domestic pressures, the weaker its relative bargaining position internationally. For example, diplomats representing an entrenched dictatorship are less able than representatives of a democracy to claim credibly that domestic pressures preclude some disadvantageous deal."(Putnam, 1988, p.449) He does acknowledge the ambiguity of the term "state strength" though this will be addressed later in this study.

This issue of negotiators latitude as well as the size and strength of the state are equally as important as another issue Putnam introduced, specifically the incentives of side payments. He states that "in a two-level game the side-payments may come from unrelated domestic sources, ..., *or they may be received as part of the international negotiation*."(Putnam, 1988, p.450, emphasis mine) This issue of side-payments, Putnam suggests "should be calculated in terms of its marginal contribution to the likelihood of ratification, rather than in terms of its overall value to the recipient nation." (Putnam, 1988, p.450) Putnams side-payments ought to be considered in terms of incentives for cooperation in the present study, offered by entrepreneurial organizations in order to induce preferred behavior. This addresses Hardin's earlier concern that by-product theory does not explain why cooperation occurs in the first place. Once an entrepreneurial organization is able to define objectives of international environmental cooperation, it is able to induce states to cooperate, both domestically and internationally by offering these side-payments. This varies in terms of feasibility based on the conditions set forth by Putnam. Before delving into the specifics of this exploration though, it is imperative to briefly address the existing literature to place this work among other scholarly work done in the areas that are related to this.

ON INTERNATIONAL ENVIRONMENTAL COOPERATION

There are numerous theoretical approaches in political science for explaining this difference in international cooperation in these two very similar cases. The realist and neo-realist international relations literature would explain this by the presence of a dominant state that coerces other states to join environmental agreements. However, the most politically and militarily powerful state in each case is Russia and it has not played a

notable leadership role in either situation.(Waltz, Kenneth, 1997, Organski, A.F.K. and Kugler, Jacek, 1980) The realist and neo-realist arguments have not successfully explained international environmental cooperation to this point, and as such need not be further addressed here. For a thorough discussion of the realist and neo-realist arguments see Chapter 1 of Haas, 1990. Further, the neo-institutionalist literature argues that the fewer the number of players the easier it is to enact cooperation regimes.(Keohane, 1984, Ostrom, 1990) However the Black Sea actually has more littoral states and additional states bordering the tributaries than the Caspian Sea. A post-materialist political economic model suggests that income levels will result in more economically advanced states favoring environmental cooperation while less economically developed nations will be less inclined this way. The assertion is that only after states reach a level of economic advancement will environmental issues become politically prevalent.(Inglehart, 1997) Yet the mean GDP/capita of the states littoral to the Caspian is only slightly lower than that of those littoral to the Black Sea, therefore disputing this potential explanation.(see Table 1)

As stated above the literature on international cooperation and regime formation has blossomed in recent years. This literature addresses critical questions for the environment, including how regimes form, their effectiveness and how cooperation comes to be favored by states regarding specific issue areas. There is a plump body of literature that examines regimes in terms of effectiveness, shifts in priorities and institutional structure as well as characteristics of regimes and why some succeed or fail once formed. However for the sake of manageability, only the literature that specifically addresses conditions for regime formation will be addressed here. This is in no way to discount the excellent research being conducted on other aspects of regimes, but rather to maintain the focus on the central question at hand.

Oran Young, 1989, lays out a series of conditions that are conducive to institutional bargaining, including a narrowly defined issue area, equality for all participants, salient solutions, clearly defined compliance mechanisms and exogenous shocks to increase awareness of the issues. While these criteria are useful in understanding why cooperation succeeds or fails, it lends itself to superficial causality in regards to domestic level player

Table 1 Economic and Political Overview of Black and Caspian Sea States

Country (Sea)	Type of Government	President (year elected)	Primary Export*	GDP/Cap p.p.p.**	World Bank Loans
Azerbaijan (Caspian)	Republic	Aliyev (1993 w/93%)	oil ($480.1m)	$1,460	$289.7 million
Bulgaria (Black)	Republic	Stoyanov (1997 w/59%)	base metals ($1,046m)	$4,100	$1 billion
Georgia (Black)	Republic	Shevardnadze (1992 w/74%)	metals (28% of exports)	$1,570	$373 million
Iran (Caspian)	Theocratic Republic	Khatami (2000 w/+69%)	oil & gas ($15,141)	$5,500	$70.7 million
Kazakhstan (Caspian)	Republic	Nazarbayev (1991, by decree)	oil & gas (32.7% of exports)	$3,000	$ 150.4million
Romania (Black)	Republic	Constantinescu (1996 w/54%)	textiles/shoes (23% of exports)	$5,300	$2.5 billion
Russia (Black/Caspian)	Federation	Putin (2000 w/54%)	fuel & energy (47.7% of exports)	$4,700	$11.29 billion
Turkey (Black)	Republican Democracy	Demirel (1993 w/54%)	clothing ($9,110 m)	$6,100	$12 billion
Turkmenistan (Caspian)	Republic	Niyazov (1990 w/99.5%)	natural gas (36.1% of exports)	$3,000	$89.5 million
Ukraine (Black)	Republic	Kuchma (1994 w/52%)	metals (41.5% of exports)	$2,500	$2.2 billion

*percent of total export provided when dollar amounts are unavailable- *EIU Country Reports*
**adjusted for purchasing power parity
From World Bank Factbook, CIA Country Reports, EUI Economist Country Reports

influence on the international bargaining processes as well as the ability of groups to influence domestic policy makers.

Several years later Young and Oreshenko(1993) attempt to explain international environmental cooperation by testing several popular theories. Relying on international agreements focusing on Arctic conservation they examine what they call Power-Based hypothesis, Interest-Based hypothesis and Cognitive-Based hypothesis. These parallel assertions of neo-realism, international pluralism and epistemic communities, respectively. Interestingly, they do note that a hegemon in the Power-Based hypothesis may be benign and therefore exercise "positive leadership, inducing others to accept its preferences regarding international institutional arrangements by agreeing to shoulder a disproportionate share of the costs of supplying regimes treated as public goods."(Young and Oreshenko, 1993, p.10) This may be similar to the role played by the international lending organizations in the cases of the Black and Caspian seas, however, it does not clearly fit the model of hegemonic influence.

Their discussion of Interest-Based hypothesis lays out a series of conditions that effect the outcomes of collective bargaining. These are widely accepted conditions for collective action, such as varying number of participants, shadow of the future, integrative bargaining, equity, salient solutions, exogenous shocks or crises, policy priority, relevant parties, compliance mechanisms, the common good and individuals as leaders. Of these, the two most relevant to this study are the policy condition, and the individuals as leaders or entrepreneurs condition. They say of the policy priority condition that the issue in question must be either quite relevant politically in order to induce cooperation, or it must be quite irrelevant politically so as to remain unchallenged. In the case studies presented, it was concluded that being a high priority or a low priority did not induce increased cooperation. It may be that these cases are somewhat limited in their scope. Additionally, it assumes that an issue will be challenged or ignored rather than shuffled in with a complex combination of other international demands placed upon the state.(Young and Osherenko, 1993, p.233) The discussion of the individual leadership issue was important according to their case studies. In cases in which there was a strong leader, cooperation occurred. While they acknowledge that the leader need not be a stakeholder, they suggest that this individual acts to advance the cause.

Somewhat later Young begins to address the question of regime formation suggesting that pre-negotiations are equally important to consider. He suggests that

agenda formation "covers the steps by which an issue initially makes its way onto the international policy agenda, is framed for the purposes of consideration in international forums and rises to a sufficiently prominent place in the international agenda to justify the expenditure or time and political capital required to move to the negotiation stage." (Young, 1997, p.11) However, based on his earlier work he also states that "parties are frequently loath to make concessions regarding how specific issues more out a concern for how this might affect their negotiating postures in other issue-areas than out of any commitment to the particular issue at hand."(Young, 1989, p.356) Thus his work seems to argue cyclically that either the issue must be important or not, or that it plays into a larger set of considerations. Nonetheless, his work has also built a strong foundation for understanding regime formation. Specifically because Young, in concert with Orenshenko, Haas, and others has demonstrated that this issue is far more complex than it would initially appear to be.

Recently though Michael Zurn criticized Young and Oreshenko for conducting a comparative study of cases with similar outcomes. He argues that "without studying a set of cases with different outcomes, one may easily identify as necessary conditions that are actually ubiquitous." (Zurn, 1998, p. 626) Zurn continues his critique of the current environmental cooperation literature by suggesting that scholars are not inclined to include cases which do not conform to their models. He argues that the 1993 work by Haas, Keohane and Levy is innovative and yet still lacks appropriate critical answers to questions they raise. Zurn does assert that international environmental regimes must be more closely and critically examined in future research. He includes an aggressive demand that the role of epistemic communities and international NGO's as actors in a domestic political system must be studied with analytical rigor not employed by the current research.

The criticism levied by Zurn as well as the assumptions of how regime formation occurs does not offer a viable explanation for the formation of a regime in the Black Sea and not in the Caspian. The incentives for cooperation at the state level are not easily addressed using the models presented above. While they do offer some guidance in regards to answering the question of why cooperation happens, there is less evidence of how cooperation comes to happens. The cases of the Black and Caspian Seas are similar

enough to compare and yet the lack of similar results produces a forum for understanding what variables are critical and which are extraneous to regime formation.

THE BLACK AND CASPIAN SEAS COMPARED

The cases of the Black and Caspian Seas are unique in their comparability, given that both seas have similarities and yet their differences do not adequately explain the difference in the tendency of the states to form or not form environmental regimes, as the case may be. This study implements a most similar systems comparative design, based on these seas situations. In order to most effectively test the hypothesis advanced here, that economic incentives result in the formation of international environment agreements the two regional seas will be examined through two states for each sea. First a simple scatterplot is employed to determine if there is appears to be a correlation between the amount of aid per capita and the level of commitment to international environmental agreements when there are not competeing counter incentives. This once it is established that aid increases, generally, as commitment increases, specific cases will be examined to ascertain that this relationship does in fact exist, or if not, what other factors may be influencing states willingness to commit to international environmental agreements. The question of incentives remains key here as it relates to the propensity of states to willingly agree to cooperative environmental stewardship.

Table 2 Aid dependency* and level of regional environmental cooperation

	1993		**1998**	
State	**$ aid/capita**	**cooperative status**	**$ aid/capita**	**cooperative status**
Azerbaijan	3	2	11	3
Bulgaria	14	4	28	5
Georgia	19	4	30	5
Iran	2	2	3	3
Kazakhstan	1	2	13	3
Romania	7	4	16	5
Russia(Black Sea)	16	4	7	5

Russia (Caspian)	16	2	7	3
Turkey	7	4	0	5
Turkmenistan	6	2	4	3
Ukraine	6	4	8	5

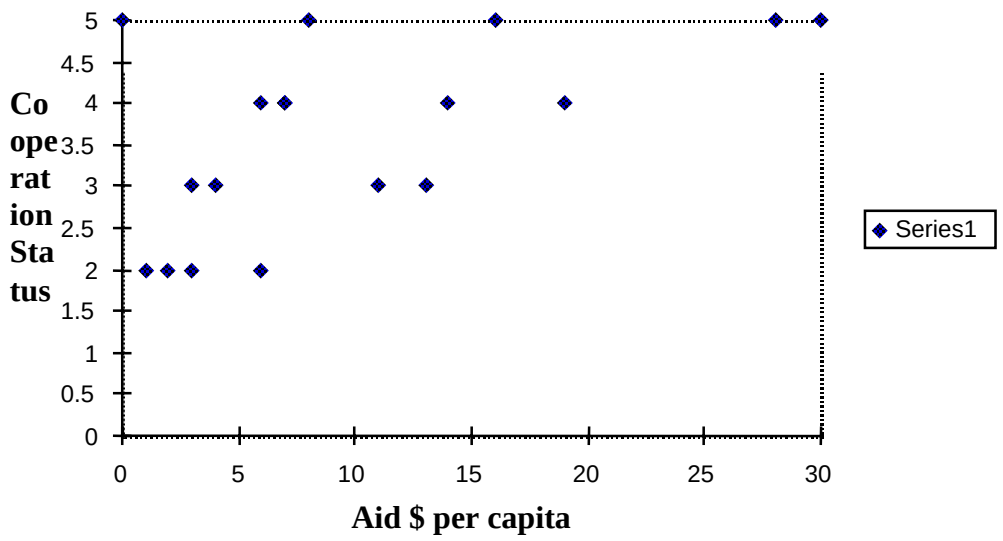
* Aid dependency determined by World Bank, from World Bank 2000, *2000 World Development Indicators, Table 6.10 Aid Dependency*

Using two data point for each of the littoral states of the Caspian and the Black Sea, the simple regression examines the relative level of commitment to cooperative environmental stewardship, in correlation with the amount of aid per capita. The level of environmental cooperation is based on an ordinal measure. Countries that had signaled no willingness to cooperate were assigned a level 1, states that had been perceived as considering willingness to cooperate but had not acknowledged this in international forums were assigned a 2, states that had worked cooperatively together towards addressing regional environmental issues without a legal pledge to cooperate were assigned a 3, states that had signed a basic framework of agreement to cooperate on regional issues were assigned a 4, states that had signed pledges of commitment were assigned a 5 and states that had ratified agreements were assigned a 5. Since implementation had not occurred within the time frame of the currently available data, no states have yet been assigned any number higher than a 5. These assessments are based upon the Bucharest Convention signed in 1992, and ratified in early 1994 by all the Black Sea littoral states for Black Sea states. The Caspian Sea states are not as unified as the Black Sea States. While there is a UN Regional Seas Programme set up in the Caspian Sea, no formal agreements have been reached as to pledges of cooperation. In 1998 Caspian states agreed on who would host which Caspian Regional Thematic Centers, as well as the Policy Coordinating Unit (Aubrey, 1998), yet no formal pledges of agreement have been signed by these states. The data for amount of aid per capita provides a standardized measure for the amount of international aid. This aid includes loans from the Development Assistance Committee, and Net Official Aid, which includes aid flows from official donors to the transition economies of Eastern Europe and the former Soviet Union and to certain advanced developing countries and territories as defined by DAC.

This aid does not include military aid or unilateral aid from states.(World Bank, 2000, Table 6.1, p. 345) While only two time periods are utlilized, it provides an adequate overview of the variation and does not risk meshing of economic data. Russia is entered twice since it is one both the Black and Caspian Seas. This data is arrayed in Table 2.

This date is not intended to demonstrate a direct correlation, but rather to demonstrate that as states become more committed to international environmental agreements, the amount of aid also increased. This does not suggest that one is directly linked to the other, but rather there is a pattern evident from the data that suggest that there is a relationship, even if not a direct one. This is more visually evident in Graph 1.

Graph 1
Aid Dependency and Agreement Status



However from the plotting of these there are several important outliers. As well as several that directly follow the emerging pattern. Therefore to better explore the relationship of economic incentives to international environmental cooperation these cases will be examines in some depth. In the Black Sea set of cases there is clear cooperation, while in the Caspian sea, emergent cooperation is less clear. Therefore taking two cases from each should be illuminating. The case of Russia is distinct and interesting, given that it is littoral to both seas, yet, it is also fraught with unmanageable difficulties as a case and should not be used for the purpose of this study. Additionally,

because of its cooperation in one case and not another, results may be less dependable. Therefore drawing from both the Black Sea and the Caspian states, it is interesting to consider states which have different levels economic incentives resulting from cooperation. In a two by two table this would be a state from each category of strong to weak cooperation and high to low economic incentives. This is laid out in table 3. The countries of the Black Sea, Georgia and Turkey are relatively self explanatory, given that Georgia has a small land mass with limited economic resources, while Turkey is much larger and wealthier by comparison.

Table 3 Economic Incentives and Cooperation

		Level of Economic Incentives	
		high	low
Cooperation	strong	Georgia /	Turkey
	weak	Iran /	Azerbaijan

Turkey also has several domestic incentives to join international environmental cooperation regimes. While the Greek and Turkish disputes over Cyprus remain ongoing, Turkey continues to work towards meeting the requirements for membership in the European Union. By signing, and ratifying the Bucharest Convention in 1992 and 1994 respectively, Turkey was signaling that it is in fact working towards meeting the environmental standards set by the EU. Additionally, while the over all size of the Turkish economy is far larger than that of other littoral states of both the Black and Caspian Seas with a per capita income of US $6,100. Table 1 demonstrates that this is the case, but also shows that the amount of World Bank loans are far more sizable than for other states at US $12 billion. However this is also funding 128 operations, where as the other number of operations in other states is much smaller, including only 40 in all of the Russian Federation.

Nonetheless, there is an additional incentive to Turkey to advocate environmental stewardship. The collapse of the Soviet Union and subsequent independence of the Caspian states resulted in an increased enthusiasm about the availability of Caspian Sea oil to the world markets. However this enthusiasm has been dampened by the conundrum of transporting this oil to world markets. The existing pipelines flow from Baku in Azerbaijan to Novorossiiska on Russia's Black Sea coast. The oil is then loaded onto tankers and shipped through the Bosphorus and Dardenells and put up for sale on the spot market. However, navigation of the Bosphorus channel and through the Dardenells is perilous and poses significant risks to the sensitive ecology of the Turkish shoreline. While Turkey has allowed this traffic to cross in the past, an increase in tanker traffic through this area increases the risks of oil spills and contamination. Turkey is bound by the 1936 Montreaux Convention that states that Turkey must allow commercial ships through the Bosphorus, however by agreeing to an environmental stewardship program Turkey has taken steps to claim environmental concerns with regards to this potential problem of excessive tanker traffic. Additionally, Turkey can now assert that increased traffic increases potential costs to the Turkish government and therefore may be able to charge for the use of this passageway in order to comply with this convention. (Demirmen, 1999)

There is another benefit to Turkey as well, that is less direct than incentives from international lending agencies. Because of the recognized sensitivity of the Black Sea, Turkey has been able to rally for support of the Baku-Ceyhan pipeline that would cross Azerbaijan, Armenia, and Turkey and would allow Caspian oil to be loaded onto tankers on the Turkish Mediterranean coast. This would serve to protect the Bosphorus as well as provide revenues for oil to Turkey that would otherwise be going to the Russian Federation from the existing route. While the Baku-Ceyhan route remains under negotiations still, the prospective income from this is substantial. It is also worth noting that this is a preferred route for Azeri and American oil men because of US restraints on trade with Iran, and prospective challenges to problems with the Russian pipelines that cross the war ravaged region of Chechnya. Hence the environmental card, as played by the Turkish government is legitimized by the agreement to take steps to protect the

environment of the Black Sea, and subsequently provides potential revenues for the state simultaneously.

Unlike Turkey, however, Georgia has far more significant immediate incentives for joining the environmental regime. Georgia is suffering from severe economic disruptions since the collapse of the Soviet Union, and while exports have increased to other states, the Georgian economy remains largely tied to that of the Russian Federation and other FSU states. As a result of this the declining economic situation does not bode well for Georgia's domestic economy. Georgia's per capita income is by far the lowest of the Black Sea states coming it at US $1,570. Additionally, Georgia has been plagued with double digit inflation since the end of the Soviet Union. Exports of metals and agricultural products have declined and left the economy stinging from supposed mismanagement from the Ministry of Finance. In addition to these problems, Georgia's semi-tropical climate was once a tourist haven for the Eastern Bloc and Soviet Union. However, when alternative venues became available once faithful tourist went elsewhere in the West. This left the Georgian resort towns of Sochi and Poti without much needed tourist income.(Mee, 2000, Mee 1992, Ozturk 1997)

Therefore, while Turkey's economy has grown and become more integrated with Europe, Georgia's economy remains tied to Russia and subsequent Russian market lapses reverberate through this small states society. On the other hand, incentives to reform the economy in Georgia as well as the political structure have come in the form of aid from lending agencies. Table 3 indicates that aid per capita increased by fifty percent in five years. While this aid is not specifically aimed at environmental remediation, it has been significant to the economy. Unilateral aid for social programs and natural reserve park restoration from Germany had been estimated at US $57.8 million, and the World Bank has allocated US $3.5 million for an environmental project on the Black Sea coast. Had the government of Georgia not been willing to sign agreements to cooperate to manage the anthropogenic effects of the Black Sea, these moneys may not have been forthcoming. However, because Georgia seeks to renew its status as a resort and tourist destination, a cleaner commonly held sea would make the shoreline far more attractive to prospective visitors.

While the transportation of oil is a significant enticement for the Turkish government in terms of revenues, Georgia also benefits from similar access. A pipeline designed to carry Caspian "early oil" runs from Baku to the Georgian port of Supsa. This pipeline is designed to carry a smaller volume of oil than the Baku-Ceyhan line. Additionally, tankers carrying this oil still must confront the issue of the Bosphorus straits and difficult passages before sale on the international market. The presence of an environmental policy in Georgia and ratification of the Bucharest Convention provide legitimacy for claims that possible soiling the environment, and insurances to protect the ecology justify higher revenues to be charged for use of this pipeline. The environmentally based loans for the Black Sea from the World Bank and the loans from Germany to rehabilitate national parks where the Baku-Ceyhan line is to run contributes to the struggling economy of Georgia.

While Georgia and Turkey both stand to gain economically from signing and ratifying international environmental agreements, the incentives for this behavior are not clearly countered by competing demands or competing incentives that would limit the degree of cooperation among states. Hence, it may be implied that the other Black Sea states have additional incentives and a lack of other disincentives. The Caspian states however are far less prone towards environmental cooperation for a number of reasons. These include questions of the legal status of the Caspian, the question of ownership of the oil and gas fields beneath the Caspian, and questions of acceptable export routes, given geo-political constraints that plague the region. For this study the cases of Azerbaijan and Iran will be discussed. The remainder of this paper will explore how economic incentives in the Caspian Sea are less tied to environmental agreements, and in the case of Azerbaijan environmental cooperation may be an economic disadvantage, while such agreements may ultimately provide the most benefit to Iran.

Azerbaijan lies upon the west coast of the Caspian, and the capital Baku is the location of the worlds first major oil rush. Fortunes of the Rothchilds and Nobel families were made from the exploitation of oil fields in Baku. Following the fall of the Soviet Union, Azerbaijan again has become a potential major oil exporter, and Baku has become the center of Western interests in the Caspian. Current estimates suggest that the Caspian contains between 124 billion barrels of oil and gas equivalent, to a full 200 billion barrels

of oil and 7,000 billion cubic meters of natural gas, “enough to supply Europe, at it’s current rate of consumption for 16 years.”(Clover, 1999, p.3) However, control of this potential wealth is not clearly defined at the time. Oil in the Caspian is a highly disputed between those who suggest that the Caspian is a lake and those who argue that it is a sea. As this dispute of the legality over the Caspian continues, Azerbaijan potential wealth teeters precipitously on this final decision. Russia and Iran claim that the Caspian is an in-land lake and that it should be divided equally, after just a few miles of coastal territorial waters are observed. New countries, Azerbaijan, Kazakhstan and Turkmenistan claim that it is a Sea and therefore prone to the Law of the Sea which would support ownership of waters, and land beneath the continental shelf for coastal states. This would favor these states since the major oil fields lay within their territorial waters, but only if the Caspian is legally a sea. If the Caspian is decreed a lake, Azerbaijan, Kazakhstan and Turkmenistan will receive a fraction of the oil wealth compared to what would be expected if it is legally a sea. Hence there is a stalemate between these states, and foreign oil companies are unable to successfully and securely negotiate for exploitation rights to these fields. As a result of this indecision, the Caspian states are in a developmental limbo.

While the World Bank has given sizable loans to Azerbaijan, the aid per capita is still far below that of Georgia and a number of the other Black Sea states. Additionally, the prospect of oil wealth has resulted in Azerbaijan jockeying for position as a Western friendly, oil exporting country eager to meet the increasing appetites of the world. While Azerbaijan is landlocked, except for the Caspian almost every pipeline route to Western markets is expected to originate in Azerbaijan. Additionally, oil exports already account for US $540 million of $781.3 million in 1997. The GDP for this year was only $1.6 billion, therefore exports of oil account for over half of this. Now with early oil moving through the Baku-Supsa line additional oil is expect to bring more revenue, and with the increased prices in oil in the West, demand for Caspian oil is expected to increase further. With the economy of Azerbaijan so dependent on oil for revenue, the political system is intricately tied to this industry as well. Illiam Aliyev, son of Azerbaijani President Heydar Aliyev, is the first vice president of SOCAR (State Oil Company of the Azerbaijani Republic) It is expected that he will step into his fathers role eventually, while holding a

very influential post already. Oil lobbyist frequently court the Clinton Administration to encourage favorable trade terms with Azerbaijan, and President Aliyev has enjoyed numerous meetings with President Clinton despite protests from the well organized and very vocal Armenian-American lobby.

On the other hand, many environmentalist consider the Baku peninsula to be one of the most polluted areas in the world. Nearly a century of reckless oil exploration and exploitation has wreaked havoc on the ecology of the Caspian shoreline, and additional drilling, exploiting, refining only adds to this catastrophic situation. On the other hand, the prospect of petro-dollars flowing into the Azeri economy declines the likelihood that ecological stewardship should become a key focus of the government, especially given the current Azeri administration that is so closely tied into this prospective wealth. In addition, if Azerbaijan were to eagerly act towards international environmental cooperation it could stand to loose a significant stake in oil reserves that is currently claims. If the legal status of the Caspian is determined to be a lake as a result of regional cooperation, the government of Azerbaijan could loose the right to sell rights to the more distant oil fields off its shore. In effect it would be required to share the profits from these fields with all the riparian nations of the Caspian. Other Caspian states would also be required to do this, though the majority of Azerbaijans prospective oil wealth is beneath the Caspian, whereas Turkmenistan, Iran, Kazakhstan and Russia all have significant reserves on land as well. Therefore the prospect of cooperation within the Caspian is most threatening to Azerbaijan.

Iran on the other hand stands to benefit the most from international environmental cooperation compared to other Caspian states. Iran's aid dependency is fairly low and the GDP/capita is fairly high compared to other states in the study. However, the economic situation in Iran has been deteriorating as oil prices fell in the 1990's and the 1995 US sanctions forbid US companies from conducting business in Iran as a result of suspected support for terrorists. This decline in revenues has been exacerbated by the increase in Iran's population which has resulted in burgeoning domestic demand for oil. It has been suggested that as Iran's oil consumption increases and production decreases because the inability to obtain spare parts for maintaining oil fields, pipelines and refineries may lead to Iran no longer being an oil exporting nation.(Potter, 1999) On the other hand, if trade

with Iran were normalized by the United States it would allow US companies to contract to revive flagging oil wells and most importantly to access modernized pipelines running from the Caspian Sea port of Neka to the Persian Gulf. While line from Neka to Tehran is not currently completed, it would enable sizable amounts of Caspian Sea oil to into Iran's transportation lines and into the world market.

However, Iran is also caught by the lack of a clear legal regime in the Caspian Sea. Whereas if it is a lake Azerbaijans economy would suffer, if it is legally a sea, Iran would not be able to claim significant reserves in its Caspian territory. It is worth noting that Iran has recently licensed Royal Dutch/Shell and Lasmo to conduct seismic surveys in a region that Azerbaijan considers to be in Azeri territory.(EIA report, 1998) Suffice to say this has increased tensions between Baku and Tehran. However, given the alternate routes for exporting Caspian oil Iran is comparatively more stable and more prone towards cooperation with the West than other routes. The Baku-Supsa line crosses earthquake prone regions as well as disputed territories with Armenia. The Baku-Ceyhan line is nearly prohibitively expensive and requires financial support that is not yet forthcoming, while crossing the conflict ridden Caucasus.(Demirmen, 1999). The current line through Russia crosses Chechen territory, which is politically unstable at best, and a war zone complete with bombing of pipelines in election years. Also the Baku-Novorossiiska line also gives Russia overwhelming control of Caspian oil. China has expressed an interest in exporting oil and gas across Central Asia, though the logistics of this, as well as the geo-political ramifications make this a potential threat to the US and the West. Hence, the situation is the best among bad options for the West.

Nonetheless, the preferred option of many oil industry members as well as among international actors would be the Iranian routes. Yet, as long as Iran is seen by the US as a "rogue" nation, prospects for these options remain slim. Interestingly enough though with the re-election of Iranian President Khatami and rise in oil prices, the US has warmed significantly to Tehran. While relations have not yet been normalized, there were steps in that direction when Madeline Albright announced the lifting of the US ban on imports of Iranian "luxury items" such as carpets, pistachios and caviar February 2000. While this does not imply that the US will permit its companies to work within Iran definitively, it creates a precedent for such action.

Iran also must signal its willingness to join international regimes, hence decreasing its "rogue nation" status. By working to cooperate towards environmental agreements in the Caspian Sea, Iran has been able to signal that it is receptive to such regimes. While the loss of legal rights to oil from the Caspian may decrease its over all expected benefit from wealth of the Caspian, cooperation will ultimately benefit the Iranian economy. Iran played key a role in the meetings to establish the Caspian Sea Environmental Programme by asserting that the care of the sea is best for those living on its shores. (Aubrey, 1998) However, when it has come to finalizing an agreement similar to the Bucharest Convention for the Black Sea, Iran and other Caspian States have not been willing to formally cooperate. As recently as March 2000, when a draft convention on the protection of the Caspian Sea environment was presented in Altamay to delegates from the Caspian Sea states these states were unwilling to sign such a document. According to Kazakh news sources "the leader of the delegation from Azerbaijan said his country had its own understanding of such a convention and they would not take part in the discussion of the document unless the final (legal) status of the Caspian is known. The Iranian delegation did not agree with the very name of the convention, which only talks about the sea environment. They think, it should be about the environment of the sea as a whole."(Khabar TV, 2000)

Hence, even though cooperation would be an ideal solution to reducing the continued degradation of the Caspian Sea, so long as the legal status of the Caspian remains unresolved disputes over rights to the oil and gas beneath it will prevent such cooperation from taking place. To add to the conundrum, the legal status must be decided by the riparian states who continue to be deadlocked over the issue. Additionally, cooperation for the environment could lead to additional economic cooperation, much as it did in the Black Sea with the Black Sea Economic Council. While this would be an ideal solution for this region, and much needed economic boost, so long as there is expected revenues from oil exploitation to be gained, international lending agencies will not be able to successfully induce cooperation.

CONCLUSION

The question initially addressed in this paper was what impact do international lending agencies have on the formation of regional environmental cooperation regimes. By comparing the Black Sea and the Caspian Sea it is possible to deduce that there is in fact an impact of these agencies. However, in the case that there are competing economic incentives that would be minimized by regional environmental cooperation, it is far less likely to occur. In the Black Sea, the states had a need for additional revenues. Because there was no other competing revenue sources, international lending agencies and international environmental organizations were able to assist states in forming international environmental agreements. In fact there were incentives for these states to have these regimes in place so that they could then benefit from other states need to transport ecologically hazardous materials through their territories. The incentives provided to these states by international lending agencies were a boon to the economies, both directly in the case of Georgia and indirectly in the case of Turkey. The Caspian states were less amenable to inducemets from international lending agencies however, because environmental cooperation could lead to a reduction in prospective oil income. Because income from the petroleum industry was expected to surpass that from international inducements for environmental cooperation, cooperation has not occured.

When viewed through the lens of Olson's by-product theory as discussed earlier the situation is some what clearer. The states of the Black Sea, while potentially latent with regards to international environmental cooperation, were able to overcome the fallacy of composition with the provision of selective incentives provided by the international lending agencies. In addition while there were incentives towards cooperation, such an action when considered within the shadow of the future of costly environmental degredation from Caspian oil transportation realistically made these loans side-payments to domestic policy makers. While there were two levels of negotiations, in Georgia, there was resounding support for environmental stewardship to increase state revenues. In Turkey there was not sufficient competition between existing groups to make international level agreements unfeasiable. Hence cooperation proceeded without undue delays. Environmental stewardship was in many ways a by-product of the other monetary benefits of cooperation. In comparison the Caspian states remain latent with regards to formalized environmental cooperation because the incentives provided by the

entrepreneurial lending agencies were not sufficient to induce these states to overcome the fallacy of composition. While cooperation is appealing to some of the group, such as Iran because of the shadow of the future and expected economic gains, there are other Caspian states such as Azerbaijan that also see the shadow of the future as far less promising economically with regards to cooperation. In addition, in regards to two-level negotiations both Azerbaijan and Iran are unable to cultivate significant support for international environmental cooperation among domestic level supporters. The side-payment that might be offered by lending agents for environmental cooperation were not competative with those of the expected petroleum income. While care for the environment is secondary, creating income is primary for these states. In conclusion, while these issues deserve further investigation, this study has deliniated cases in which international lending agencies are able to induce cooperation and cases in which they are not because there are other compettng economic incentives that limit the possibility of international environmental cooperation.

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