

Appendix A

Coding Instructions for Area Expert

Issues and Variables

In this project, we use Bueno de Mesquita's latest model to predict the degree to which Canada will maintain sovereignty over its Arctic territory and waters (see Bueno de Mesquita 2011). Our first expert has identified a list of issues areas related to Canadian sovereignty in the Arctic. We would like you to identify the list of involved actors, their influence in resolving the issue, the actor's position on the issue, the issue's salience for the actor, their flexibility on the issue, and whether they hold a veto. We describe the process for coding each of these variables below. At the end of the document, you will find a table to be used in the coding for each of the issues.

Definition of Issues: An issue is any specific policy question for which different individuals or groups have preferences regarding the outcome. The possible outcomes must be able to be placed on a line. The right and left ends of each policy line identifies the most extreme outcomes ***actually supported*** by any interested party within the context of the situation.

Between the extremes, you should label other points that are supported by an interested party. Additionally, where appropriate, it is useful to identify the location of the status quo on the issue continuum. Not every issue has a status quo, but it is useful to keep a record if it exists.

The spacing between the points on the line should reflect their relative substantive distance from each other. Each position should be given a numerical value from 0-100.

Our first expert has identified the issues as the following (and in no presumed order of importance):

- to what extent Canada will retain control over seabed resources
- fishing rights (migratory and non-migratory)
- transit of science vessels
- transit of military vessels
- indigenous rights (recognition and decision-making powers)
- constabulary powers
- search and rescue

However, the policy positions have not been filled in. We will provide instructions on doing so below.

As our second expert, we want to qualify that your role does *not* entail acceptance of this preceding list of issues. You should feel free to collapse issues together, re-label them or add new issues. We briefly consulted another expert up front to provide some degree of 'inter-coder reliability' between people with knowledge about the Arctic. Put differently, we will learn from the degree to which you are comfortable with the list that appears as opposed to something significantly revised.

Policy Position:

The policy position is the position the stakeholder favors or advocates within the context of the situation. Identify the numerical position of each actor on the issue line. The spacing between the points on the line should reflect their relative substantive distance from each other. Each position should be given a numerical value from 0-100.

Potential Influence:

Potential influence reflects the relative potential ability of each player to persuade other stakeholders to adjust their approach to the issue. The ability to persuade may be derived from holding a position of authority, being an expert, commanding a large budget, or any other factor that makes others listen to someone. All values must be larger than 0. The highest possible value is 100.

The player(s) with the largest possible influence are given a score of 100. The potential influence of other players is identified relative to 100. For example, if two players with a potential influence of 50 combined, they would have the same amount of influence as a player with a potential influence of 100. The influence scores should not be thought of as percentages. A decision maker with a score of 100 does not have 100 percent of the potential influence and may, in fact, have only a small percentage of the total. The total is the sum of all of the potential influence across all of the groups or decision makers.

Salience:

Salience assesses how focused a player is on the issue. Its value is best thought of in terms of how prepared the stakeholder is to work on the issue when it comes up rather than some other issue on his or her plate.

90-100: This is my most important issue. I would drop whatever I am doing and turn to this issue whenever asked.

70-80: This issue is very important to me. It is certainly one of my most important issues. I would try very hard to reschedule to handle this issue when it arises.

50-60: This is one of several important issues. Others are more important. I would have to drop this if one of those others arose, but otherwise I will try to focus on this issue.

30-40: This is an issue I care about, but it is not that important to me. I have many more important issues to deal with and so generally would not drop what I am doing to deal with this and generally would focus on something else.

10-20: This is a minor issue to me. I rarely pay attention or make much effort.

Less than 10: I really don't care about this issue.

Flexibility/Resolve:

Flexibility/Resolve evaluates the player's preference for reaching an agreement as compared to sticking to his or her preferred position even if it means failing to reach an agreement. The variable ranges between 0 and 100. Higher values reflect greater flexibility; lower values greater resolve. The meaning of alternative values is illustrated below.

90-100: Overwhelmingly prefers reaching an agreement and being a party to it. The stakeholder is prepared to accept almost any outcome on the continuum if it means resolving the issue.

70-80: Reaching an agreement is considerably more preferable than showing resolve and sticking to one's position, but the stakeholder has limits concerning how far s/he will go on the continuum to make a deal.

50-60: The stakeholder has a fair amount of flexibility regarding the outcome, but is mindful of trying to promote seriously the position s/he prefers. Reaching agreement is about as important as promoting an outcome favored by the stakeholder. Few players are routinely much higher than this to start with. Of course, some are so take this observation as just a rule of thumb.

30-40: Reaching an agreement is considerably less preferable than showing resolve and sticking to one's position, but the stakeholder is open to significant concessions on the issue dimension in order to improve his or her welfare on the flexibility/resolve dimension.

10-20: The stakeholder strongly values the position s/he has advocated although s/he will make some significant concessions to reach an agreement not too far from his/her current position. Losing is preferred to being a party to a deal that is not close to the stakeholder's preferred position.

Near 0: The stakeholder is almost completely intransigent so that there are very few issue resolutions s/he will agree to and they must be very near the stakeholder's preferred position. The player is highly resolved and prepared to lose rather than offer more than minor concessions.

Veto:

If a player has the ability to veto any agreement, assign a 1 to the player. Otherwise, assign 0.

Appendix C

The Effect of Shocks on Base Predictions

In addition to the base models, we ran an additional 20 simulations for each model. For seven of the models, these additional simulations allowed for a 10% chance in each round that the value of any input could be changed by a magnitude of 10%. In two models – fishing rights and seabed resources – the probability and magnitude of the shock is 30%. The graphs show the smoothed mean for the base model as well as the range and quartiles for the additional 20 simulations.

Figure 1.1: Search and Rescue (on land and in water Canada claims)

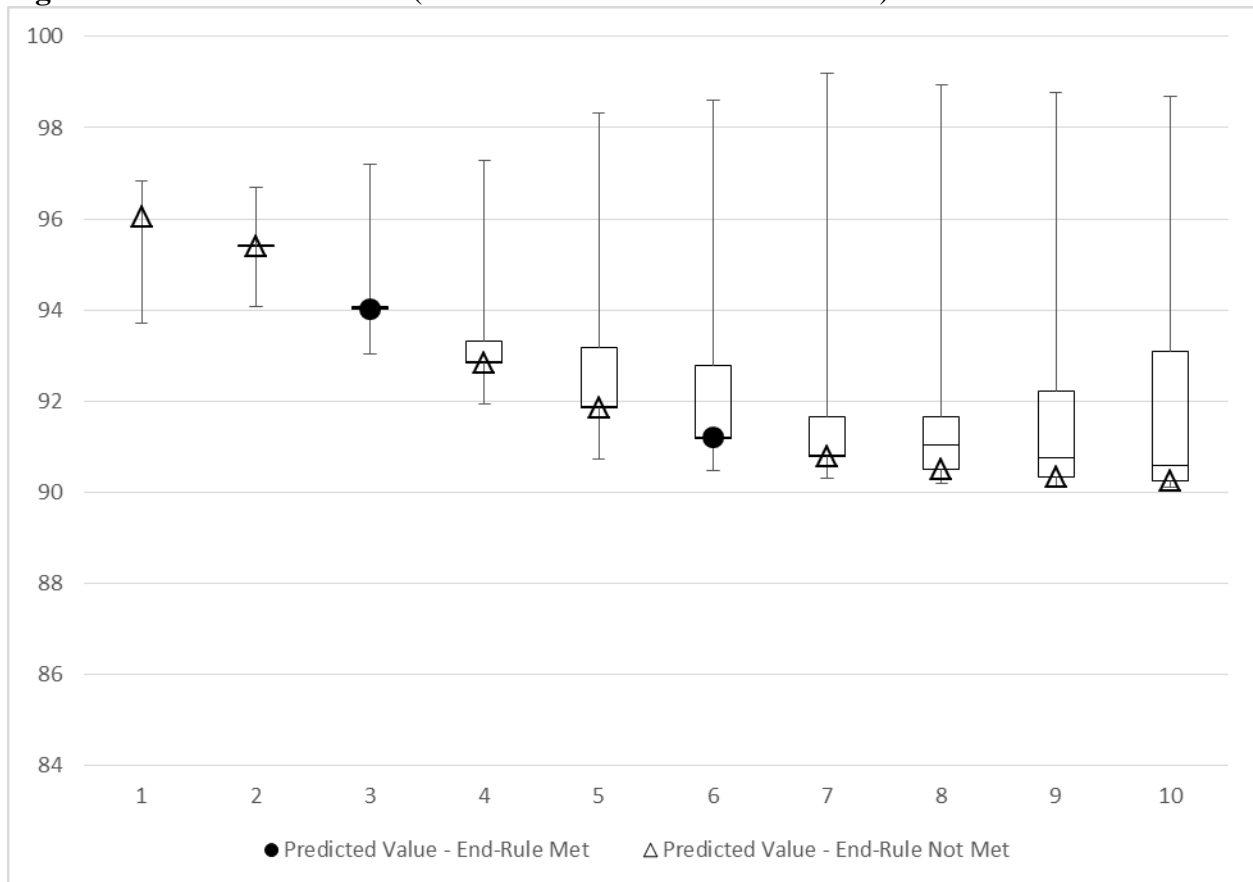


Figure 1.2: Environmental Protection – Northwest Passage

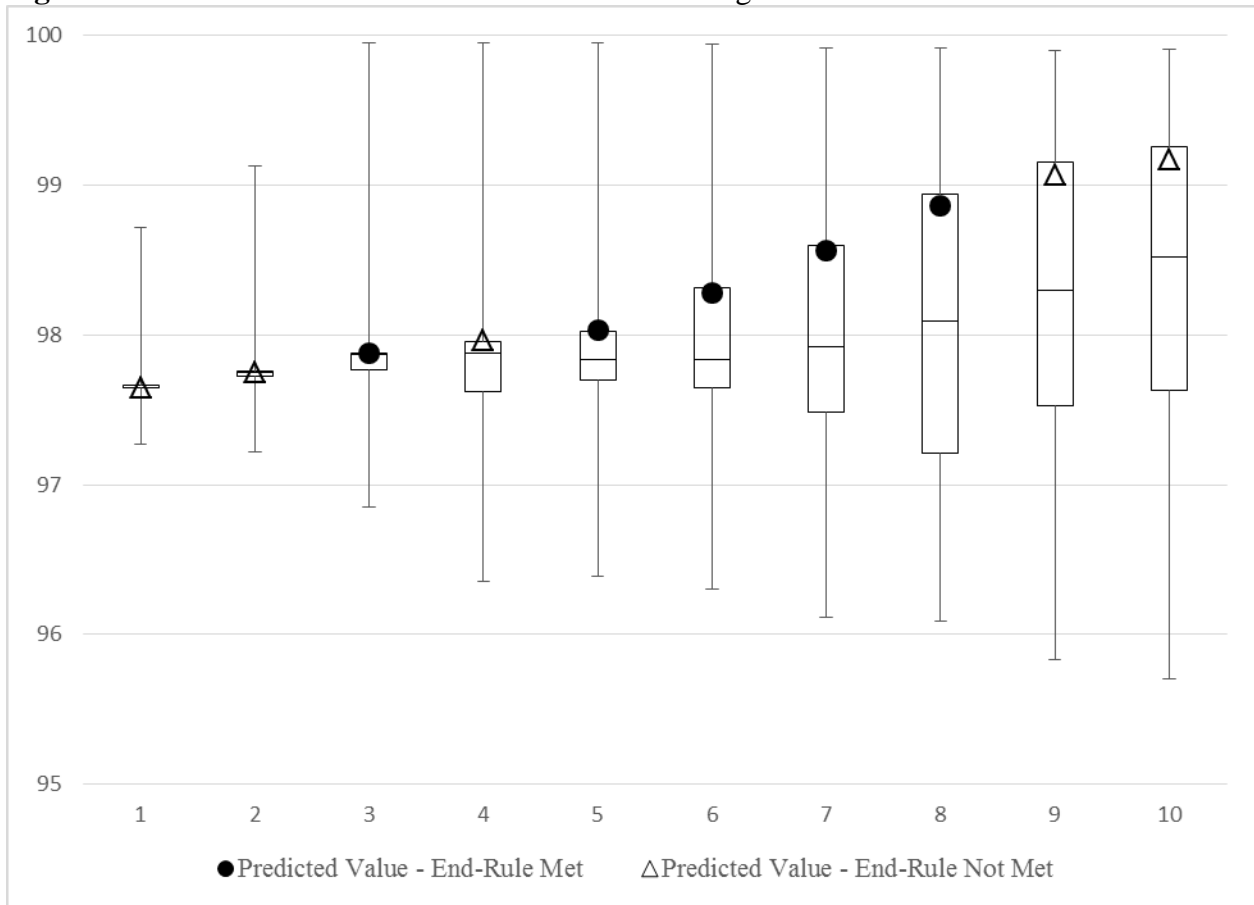


Figure 1.3: Fishing Rights – Non-migratory stocks (Continental Shelf beyond the 200 nm limit)

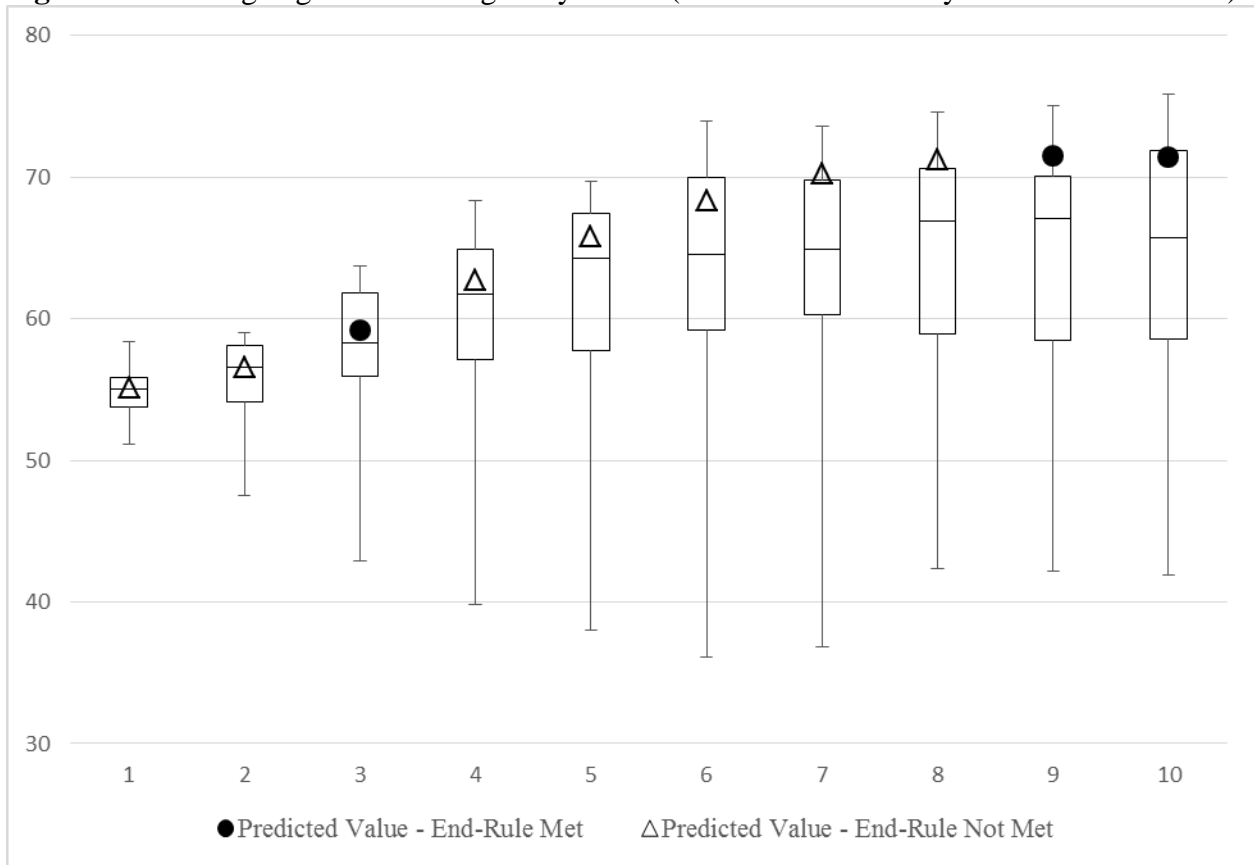


Figure 1.4: Military Vessels in Arctic Waters – Northwest Passage

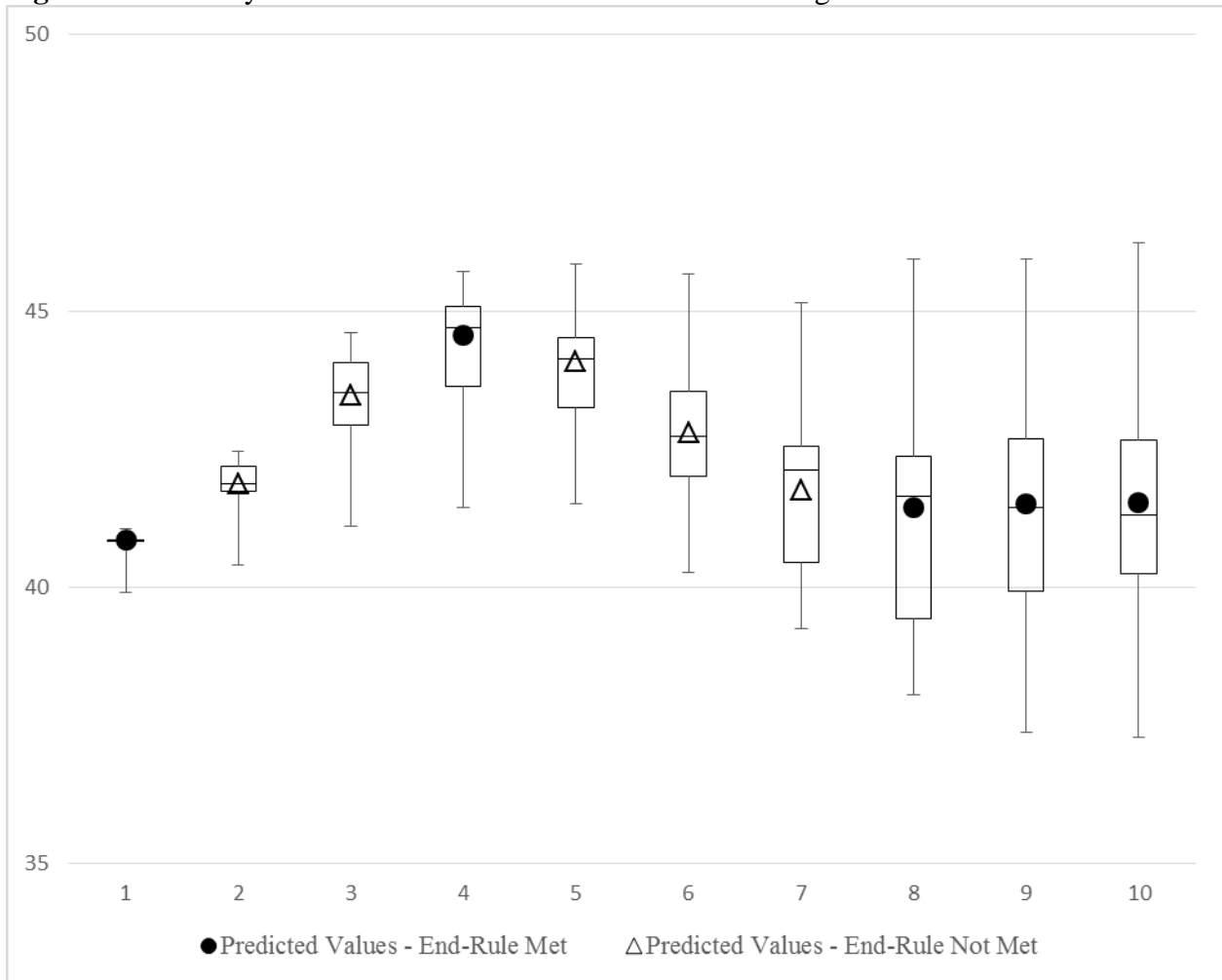


Figure 1.5: Transit of Non-military and Privately Owned/Operated Ships – EEZ

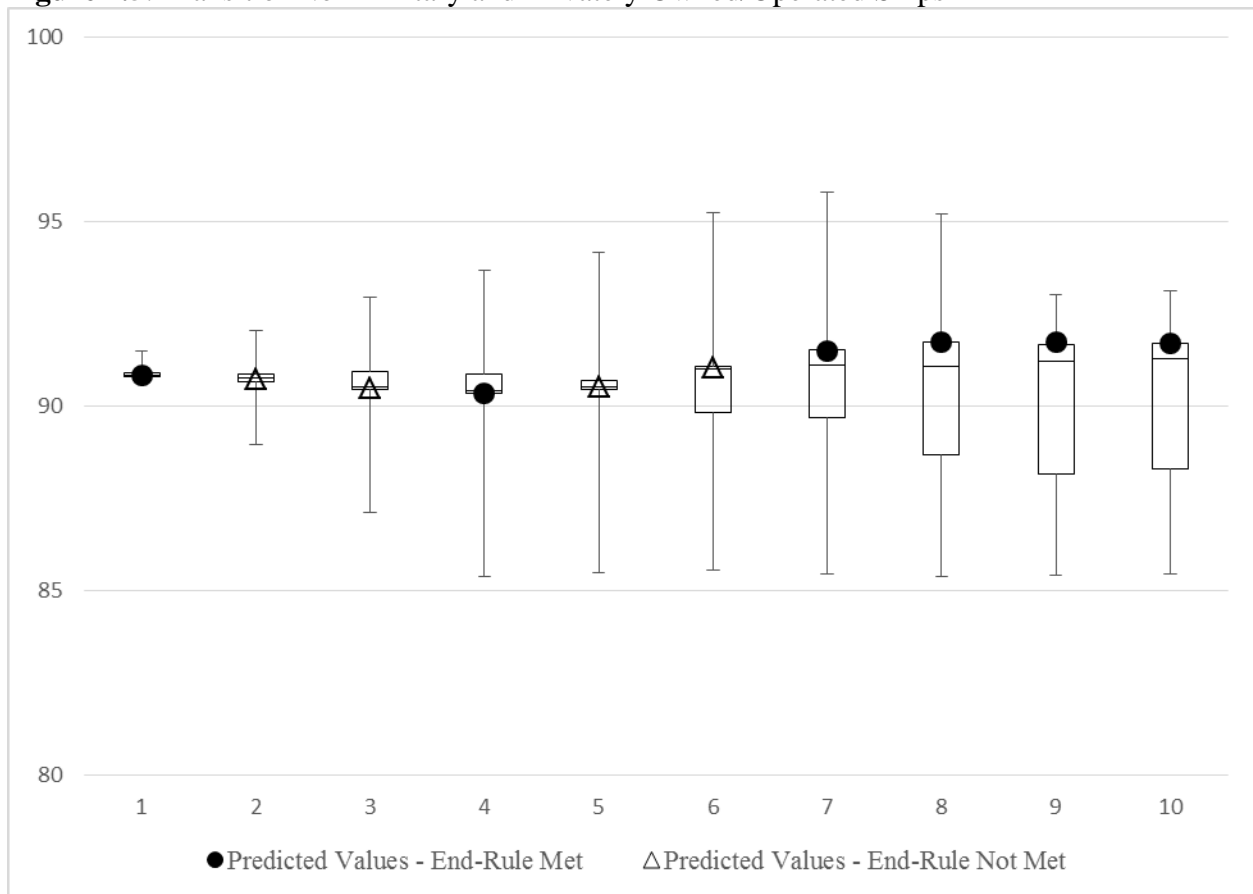


Figure 1.6: Transit of Non-military and Privately Owned/Operated Ships – Northwest Passage

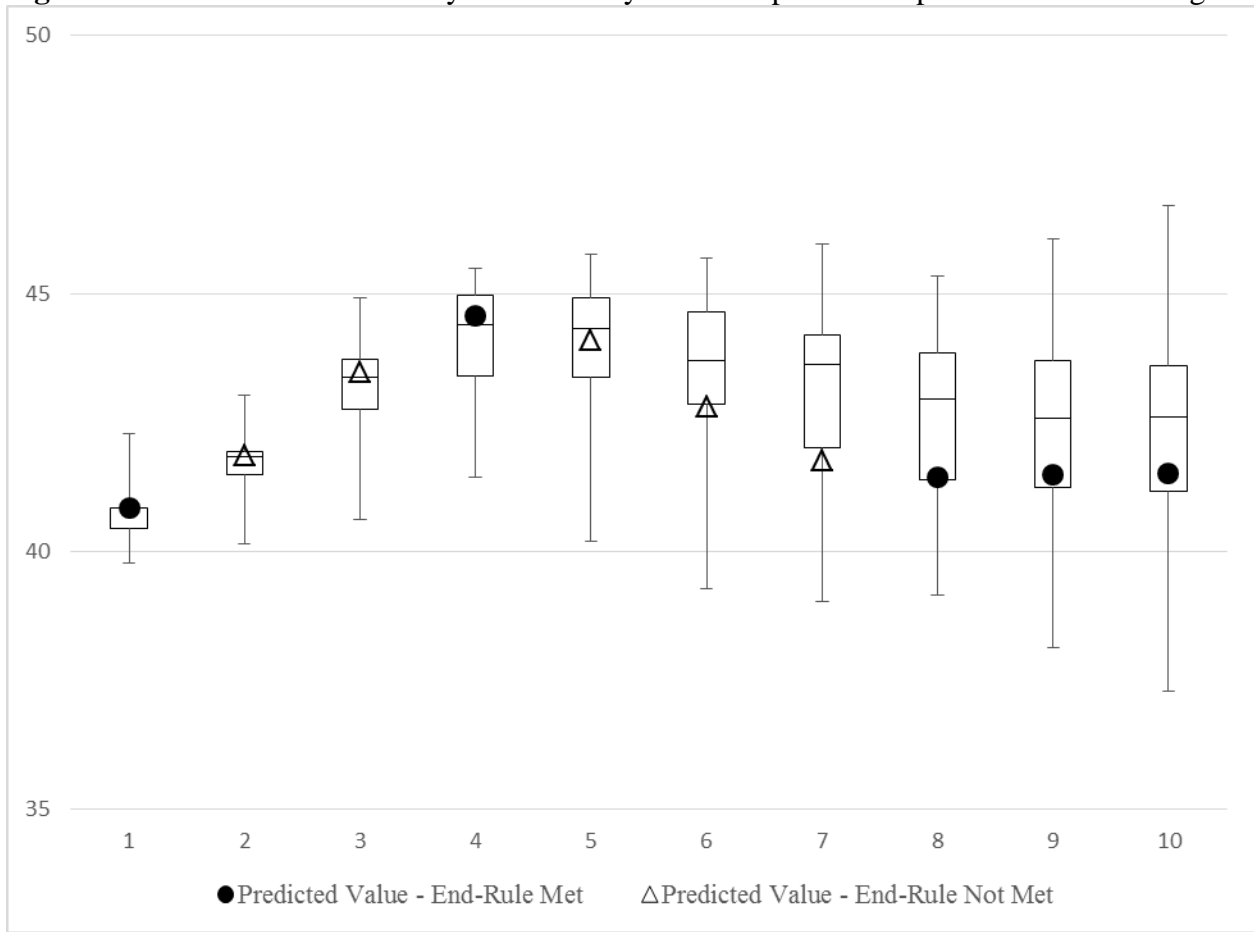


Figure 1.7: Transit of scientific vessels – Northwest Passage

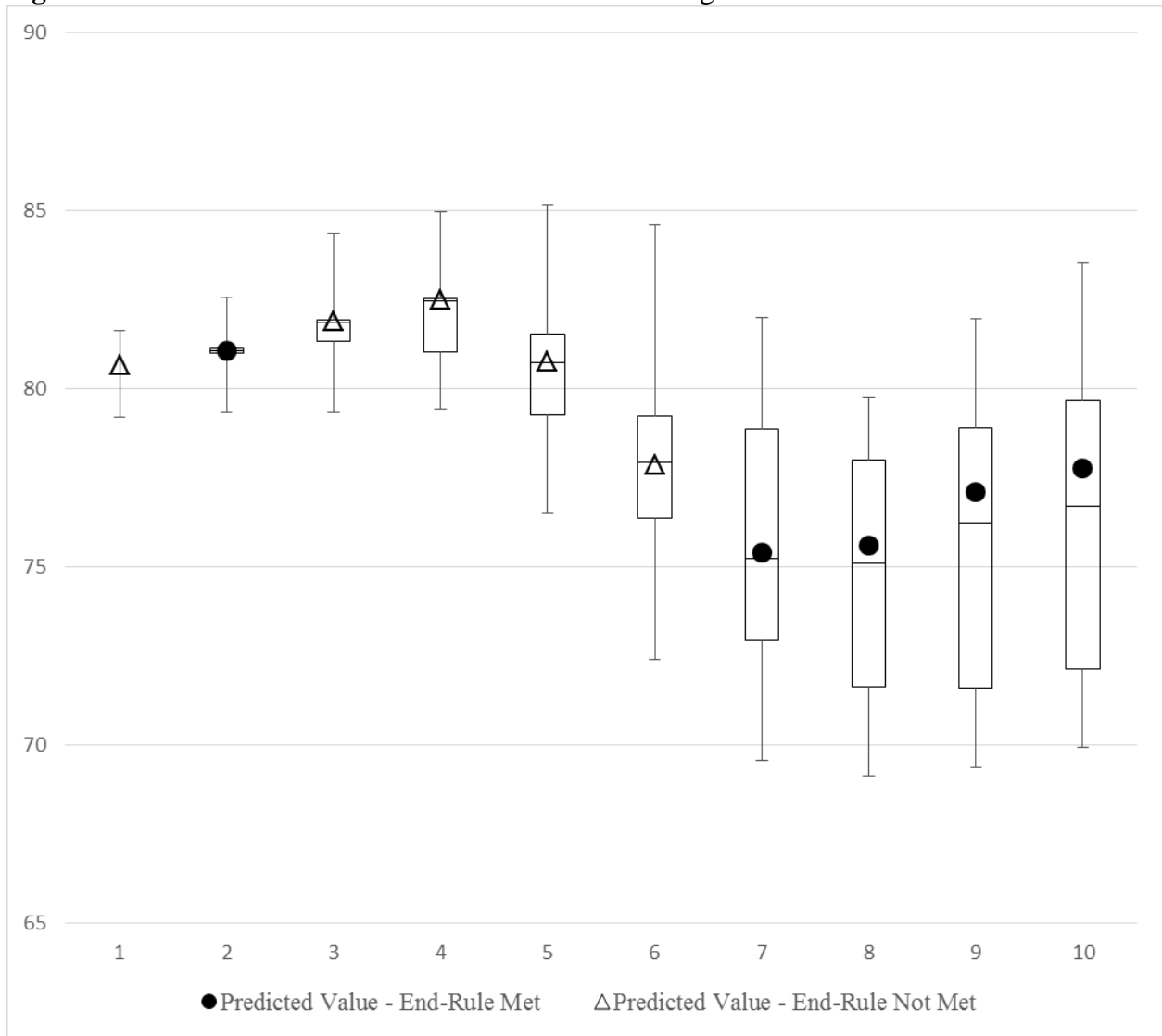


Figure 1.8: Seabed resources – Continental shelf beyond the 200 nm limit (Disputed areas)

