**Environmentalism in the United States: A Study of Public Opinion and Congressional Voting Patterns**

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POSC 4930

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7 March 2014

**I. Introduction**

In world that is becoming increasingly aware of its own misuse—or better phrased, its own ignorance—of the environment in which it is surrounded (Shipan and Lowry, 2001), it would be heartening to find that as the people of the United States are becoming more environmentally aware, the United States Congress, in response to their constituents, is taking steps to protect the environment. This analysis seeks to answer the following question: what factors affect public opinion concerning the environment and what Congressional voting patterns exist pertaining to the environment over time? This analysis will also be helpful in clarifying the exact motivations behind Congress’ attempts to be environmentally active.

It should be expected that as environmental awareness has increased, so should Congressional voting and related to the environment. In addition, the divergence on the issue of the environment between the Republicans and Democrats will no doubt have an effect upon Congressional outcomes on the environment. Though, it could potentially be the case that each individual member of Congress votes for or against environmental legislation primarily based on his or her beliefs rather than on his or her constituents’ desires as sometimes has been the case (Nelson, 2002). In addition, it is likely that the Senate—which is more shielded from the sway of public opinion—will be more pro-environment (Shipan and Lowry, 1997).

This analysis reaches several conclusions. Frist, the data show that there is in fact a relationship between family income, political ideology, and ethnicity and the U.S. public’s support for the environment. Surprisingly, however, public overall support of the environment has stayed roughly the same over the least decade. Second, congressional voting concerning the environment increased over time from 1947-2008. Some types of environmental legislation have remained popular in Congress, such as species and forest protection and air pollution, global warming, and noise pollution, while other types of environmental legislation—such as legislation concerning environmental education and eco-terrorism—lost popularity after the 1970s. Further, some types of legislation have oscillated in popularity showing no consistent pattern over time, such as indoor environmental hazard legislation. Third, this analysis indicates that environmental legislation has been the most popular during two periods: the 1970s with a resurgence of popularity in the 1990s. Fourth, this analysis offers some possible explanations for some of the individual environmental legislation graph oscillations. For example, recycling displays a strong double peak with one peak occurring in 1973 and the other, higher peak occurring in 1991. The likely explanation for this occurrence involves a trash shipping barge that travelled up and down the East Coast of the United States from New York that was unable to find a coast city willing to take the shipment. This raised concerns about waste management and recycling policy in the United States and contributed to a resurgence in public concern about recycling as reflected by the passage of many recycling bills in Congress during the 1990s.

**II. Literature Review**

A substantial amount of prior research has already been conducted on the relationship between certain factors and the public’s support of the environment, though a consensus on all points has not necessarily been reached. In reviewing the literature, it seems that environmental stewardship became an important issue in the minds of the United States public after the decade of the 1970’s. From this time forward, the environment became a prominent issue whenever it seemed to be degraded or treated with a lack of respect by the government or private businesses. For example, in the early 1980’s many people thought that two of President Reagan’s appointees, Interior Secretary James Watt and EPA Administrator Anne Gorsuch Burford, did not share the their (the U.S. public’s) commitment to the environment and thus the topic of the environment was very important during that time (Ladd & Bowman, 1996). However, it has been noted that some opposed oil development along the U.S. coast as early as 1899 show that environmental concern might have started long before the 1980’s (Smith, 2002). One point, however, is undisputable: the public’s care for the environment, regardless of exactly when it started, rose dramatically from almost complete apathy to very intimate concern. Hazel Erskine phrased it: “A miracle of public opinion has been the unprecedented speed and urgency with which ecological issues have burst into American consciousness” (Agnone, 2007). Further, irrespective of how public opinion of the environment is measured, it is apparent that public’s support of the environment does affect policy change at the federal level of the United States (Weaver, 2008). Thus, if the factors that affect the public’s opinion of the environment can be meaningfully revealed, it will also dictate, to some degree, how certain factors affect environmental policy decisions made by the U.S. Federal Government.

There appears to be two major schools of thought associated with attempting to describe the relationship between public opinion and the environment. The first of these are sociodemographic and social-psychological descriptions. This kind of reasoning seeks to explain the relationship between public opinion of the environment and certain sociological factors such age, sex, income, education, and political ideology for example. The second type of analysis attempts to link environmental attitudes with behavior. This approach involves assessing how beliefs and attitudes about the environment spur people to act in favor or disfavor of the environment. The technique shows that rather than opinions about the environment being based on certain factors, public opinion about the environment is independent of factors and instead is the first step in analysis. This research starts with public beliefs about the environment and then proceeds to study the behaviors that such attitudes create (Weaver, 2008).

An interesting question in the literature is concerned with what people across the world label as the causes of environmental degradation and/or negligence. Several sources have been put forth on surveys, and the top answers seem to be business’s concern for growth over concern for the environment, the lack of understanding in general about how to best protect the environment, individual wastefulness, and a lack of governmental emphasis on the environment. Among developing countries, overpopulation is mentioned a major factor contributing to environmental degradation (which makes sense seeing as developing countries tend to have a higher population growth than developed countries) (Bloom, 1995).

Though several factors seem to affect public opinion of the environment there is not always a consensus on what relationship (positive or negative) exists between any given factor and the public’s support of the environment. Variables such as religion have very defined and generally predictable relationships with environmental concern. Those outside the Judeo-Christian religious system tend are the most pro-environment whereas within Christianity, Roman Catholics tend to be the most environmentally concerned (Guth, Green, Kellstedt, & Smidt, 1995). Conversely, factors such as sex do not have well-described relationships with public opinion of the environment. Little study has been conducted on the effect of sex upon concern for the environment (Van Liere & Dunlap, 1980).

Political beliefs can and do have a very substantial impact on the public opinion of the environment. American Liberals tend to be more supportive of the environment than American Conservatives. However, while it is apparent that personal political ideology affects public opinion of the environment, it is not clear that party affiliation has the same effect (Van Liere & Dunlap, 1980).

In sum, the literature on the relationship between certain factors and public support for the environment is substantial though not necessarily at consensus on all issues nor has every relationship been studied. There is also the question of methodology—is public opinion of the environment to be studied by observing the effect of certain factors that pertain to a person’s environmental outlook or should a link between environmental attitudes and behavior attempt to be described? Further, if factors are appropriately studied, to what degree do they affect the public’s support of the environment? It is the attempt of the research below to answer such questions meaningfully and elucidate how and to what extent certain factors on the public opinion of the environment.

Beginning in 1970 with Richard Nixon’s “Environmental Message,” Congress passed several pieces of legislation to protect the environment. These included, among others, the Clean Air Act Amendments of 1970. Important to note is the fact that these pieces of legislation were decidedly bi-partisan. In fact, during the 1970s, “the average votes in favor of major federal environmental legislation […] was seventy to five in the Senate and 331 to thirty in the House.” (Lazarus, 2003)

Utilizing the individual congressperson scores by the League of Conservative Voters (LCV), it is apparent that since 1970 both the Republicans and Democrats have become increasingly partisan on environmental issues. In 1971, the difference between Democrat and Republican average LCV scores was 9 points. By 2000, this divide grew to 58 points. The same holds true for the Senate with the party difference in average LCV scores rising from 27 points to 71 points from 1971 to 2000. (Lazarus, 2003) This partisan divide could result in one of three possible outcomes for the future of Congress: Gridlock, price offsets for carbon-intensive regions, or anti-regressive policies such as subsidies for environmentally friendly technology. (Kahn & Cragg, 2009) Obviously, in the current Congress, Gridlock has been the result thus far.

Especially pertinent to Congressional voting related to the environment has been the effect of ideology upon members of Congress. As is expected, political liberals are the most pro-environment whereas conservatives tend to be less pro-environment or even decidedly against environmental legislation. (Ritt & Ostheimer, 1974) Demographically, higher educational attainment and minority status each separately correlate to higher support for environmental legislation while manufacturing workers tend oppose environmental regulation. The demographic changes that took place between 1970 and 1990 have contributed to rising support for environmental legislation as well. (Kahn, 2002) Despite these demographic realities, district constituency makeup is a weak component of a congressman’s decision to vote in favor of pro-environment legislation. Of much more importance is a congressperson’s ideology and partisanship. In some cases, paradoxically, liberal congressman will represent districts with the *least* environmentally concerned constituency. This may be due to differing understandings of environmental concerns across socio-economic lines. (Ritt & Ostheimer, 1974) These conclusions somewhat contradict the work of others that demonstrate that on the whole, members of Congress keep their campaign promises, at least in the area of environmental protection. In fact, campaign promises can be used as reliable indicators of congressional voting behavior with regards to the environment, though it must be noted that certain members of Congress are more prone to keep campaign promises than others. Contrary to popular belief, long-term representatives are more likely to keep campaign promises whereas Republicans and representatives from southern states are more likely to break campaign promises, especially environmental campaign promises (Ringquist & Dasse, 2004).

In accordance with Ringquist and Dasse (2004), it is also apparent that legislators are more likely to advance the environmental concerns of special interest groups than they are to advance broad public preferences as it relates to the environment. In addition, the Supreme Court appears to be increasingly hostile towards environmental groups. Consequently, if Congress wishes to continue its established relationship equilibrium with environmental groups, it must discover new ways to circumnavigate Supreme Court. The obvious result will be a decrease in the role the Supreme Court plays in environmental law (Farber, 1992).

Using the congressional passage of the Dominican Republic and Central American Free Trade Agreement (CAFTA) as a case study, it is also apparent that environmental lobbying is very ineffective in the United States. As is many times the case in politically related matters, this phenomenon is due to a lack of campaign contributions on the part of environmental lobbying groups. Most environmental interest groups attempt to affect congressional votes by disseminating information, hosting meetings, and engaging in general persuasionary tactics. When competing against the contributions of political action committees (PACs) and businesses in general, this informational technique has proved to be utterly insignificant in swaying congressional voting patterns related to the environment with respect to the passage of CAFTA. (Abetti, 2008) However, these findings are disputed somewhat by other scholars. One particular study argues that

“Viewed from the perspective of two decades of political science research on interest groups, […] our analysis of the political behavior of the members of environmental organizations suggests that it [constituent pressure on lawmakers to adopt pro-environment legislation] is a strategy which yields some modest legislative reward [in the Senate]” (Fowler & Shaiko, 1987).

It also appears to be the case that the amount of public opinion and force of that opinion has a direct effect on the passage of environmental legislation in Congress. For instance, the larger the amount of protest concerning a given environmental issue, the more likely Congress will pass legislation concerning that issue due to the increased salience that protest provides to public opinion concerning the environment. This has been termed the “amplification model of policy impact” model (Agnone, 2007).

Another study focused on the effect of environmental disasters or emergencies on congressional voting patterns related to the environment. The study considered the effects of Three Mile Island, Love Canal, Bhopal, Chernobyl and the Exxon Valdez oil spill on Congressional voting patterns to observe if any of these events spurred congressmen and congresswomen to vote more in favor of the environment. Counter-intuitively, the findings demonstrated that environmental disasters actually cause members of Congress to be less supportive of the environment. The explanation posited in response to this finding was that bill selection causes very pro-environment members of Congress to be the proposers of new environmental legislation in the wake of an environmental disaster. Such legislation, due to the nature of its sponsor, would be too stringent and “over-the-top” and consequently be rejected by Congress at large. In addition, the study found that liberal northeastern representatives that received little campaign funding from corporations were the most likely to vote pro-environment in the wake of an environmental shock. (Kahn, 2007)

It is also apparent from environment-related literature that market-based instruments are much more cost-effective and preferred by firms than command-and-control standards (e.g. environmental legislation passed by Congress that requires something of a business firm). The authors state:

“At least in theory, market-based instruments minimize the aggregate cost of achieving a given level of environmental protection, and provide dynamic incentives for the adoption and diffusion of cheaper and better control technologies. Despite these advantages, market-based instruments have been used far less frequently than command-and-control standards.” (Keohane, et. al., 1998)

Therefore, it is apparent that the market would be, in theory, better at achieving environmental goals at a lower cost. However, the U.S. Congress has been much more likely to pass legislation than to allow for market-based instruments to develop. The authors believes to this to have occurred for a variety of reasons. First, legislators may be more comfortable legislating a particular standard due to their lack of experience with market-based standards. Second, command-and-control standards hide costs more effectively while emphasizing potential benefits. Third, command-and-control standards also allow legislators to make symbolic political actions more easily. Finally, command-and-control standards allow legislators more control over the distribution of the effects of environmental legislation. (Keohane, et. al., 1998)

It also appears to be the case that businesses are much more likely to win lawsuits relating to environmental concerns when the case is of a statutory nature. This could be due to the fact that environmental groups (who usually initiate environmental lawsuits against businesses), due to limited resources, are less likely to bring forth lawsuits that will fail. In addition, “A plausible alternative explanation is that some environmental challenges involve cases in which the EPA missed a statutory deadline” (Revesz, 1997).

In reviewing the literature concerning congressional voting patterns with regard to environmentalism and Green Politics, it is apparent that the U.S. Congress has become more environmentally aware over time, though there are several ideological and demographic concerns that affect their voting behavior as well. Despite this progression, however, environmental voting has become more partisan—with Democrats being more pro-environment than Republicans. In addition, environmental disasters do not seem to cause congressman pr congresswomen to vote in favor of environmental legislation--in fact, the opposite appears to be the case. (Ritt & Ostheimer, 1974)

**III. Data and Methods**

The methodology used to assess the effect of certain factors that pertain to a person’s environmental outlook consisted in the analysis of the American National Election Studies (ANES), the General Social Survey (GSS) and Gallup™ survey data. The following indicators were analyzed with respect to public opinion concerning the environment: family income, political ideology, and ethnicity. These indicators were combined with survey data about concern for the environment and plotted over time. ANES conducts national surveys of the American electorate and conducts development work through pilot studies during non-election years. (American National Election Studies, n.d.) The GSS is a compilation of data covering a wide variety of societal data (the data is particularly useful as the questions in the survey are purposefully kept the same so that the data can be tracked over time). Gallup™ performs public opinion polls of United States citizens to ascertain the general opinions on major topics. To compile ANES and GSS survey data, the Survey Documentation and Analysis (SDA) program by the Computer-assisted Survey Methods Program (CSM) of the University of California, Berkley was utilized. To use the program the user must input the following variables in order to generate a table: Row, Column, and Control variables. The set of available variables that were used for this report were taken from the “ANES Cumulative Datafile 1948-2004” and the “General Social Survey (GSS) Cumulative Datafile 1972-2008” were used. For all of the ANES factors measured below, the Row variable was the same: “Environment – Federal Spending (VCF9047).” This measured whether or not respondents thought that federal spending on the environment should be “Increased,” “Stay the same,” “Decreased,” “Cut out completely (volunteered) [2000-2002 only; see below],” or “DK[Don’t Know]/No Answer.” This variable is used to measure “public opinion concerning the environment” in general as it relates to the research question of this report. For all of the factors measured below, the Control variable was also the same: “Year of Study (VCF0004)” or, simply put, year.

Using constant Row and Control variables, the Column variable was set to each of the factors discussed below (family income, political ideology, and ethnicity) in order to see that effect of that variable upon the public’s support of the environment over time.

GSS data measured environmental concern (Row variable) by asking those participating in the survey to mark whether or not they thought federal government should: “Spend much more,” “Spend more,” “Spend same,” “spend less,” or “spend much less” (variable: SPENVIRO). The Control variable for the GSS was set to “GSS Year for this Respondent (YEAR).”

Family income (ANES column variable: “Family Income [VCF0114]”) was measured by where ANES survey respondents placed themselves in one of five income quintiles: “0 to 16 percentile,” “17 to 33 percentile,” “34 to 67 percentile,” “68 to 95 percentile,” and “95 to 100 percentile.” The results for family income can be located in *Appendix A*. The results for the different income quintiles and how much they favored an increase on federal spending on the environment are located in **Figure 1-A**. The results for how much the different income quintiles supported a decrease in federal spending on the environment are located in **Figure 1-B** and the results for the different income quintiles that supported keeping the amount of federal spending on the environment the same are located in **Figure 1-C**. Please note: There is no data for 1998 and in 2000 only, “Cut out entirely” was added as a possible answer to the ANES survey. To keep the statistics uniform, an answer of “Cut out entirely” on the survey was counted as an answer of “Decreased” for this data set.

Political ideology (ANES column variable: “Liberal-Conservative 7pt Scale [VCF0803]”) was measured by how respondents placed themselves on a seven-point spectrum: (1) “Extremely liberal,” (2) “Liberal,” (3) “Slightly liberal,” (4) “Moderate, middle of the road,” (5) “Slightly conservative,” (6) “Conservative,” (7) “Extremely conservative,” or (8) “DK[Don’t know]; haven't thought much about it.” The results for the factor of ethnicity are recorded in *Appendix B*. The results for how much each political ideology supported an increase of federal environmental spending are located in **Figure 2-A**. The results for how much each political ideology supported a decrease in federal spending on the environment are located in **Figure 2-B** and the results for the different political ideologies that supported keeping the amount of federal spending on the environment the same are located in **Figure 2-C**. Please note: There is no data for 1998 and in 2000 only, “Cut out entirely” was added as a possible answer to the ANES survey. To keep the statistics uniform, an answer of “Cut out entirely” on the survey was counted as an answer of “Decreased” for this data set.

GSS data for political ideology was worked along a different scale. The column variable was set to “Political Party Affiliation (PARTYID)” and included the following seven possible survey choices for respondents: “Strong Democrat,” “Not Strong Democrat,” “Independent, Near Democrat,” “Independent,” “Independent, Near Republican,” “Not Strong Republican,” and “Strong Republican.” The results for the factor of ethnicity are recorded in *Appendix C*. The results for how much each political party affiliation supported an increase of federal environmental spending are located in **Figure 3-A**. The results for how much each political party affiliation supported a decrease in federal spending on the environment are located in **Figure 3-B** and the results for the different political party affiliations that supported keeping the amount of federal spending on the environment the same are located in **Figure 3-C**. Note that “Spend much more” and “Spend more” were combined to give a single indicator of a support for increased federal spending on the environment. The same was done for “Spend much less” and “Spend less” for measuring support for decreasing federal spending on the environment.

Ethnicity (ANES column variable: “Respondent Race 6-cateogry [VCF0106A]”) was measured based on where respondents placed themselves categorically: (1) “White,” (2) “Black,” (3) “Asian,” (4) “Native American,” (5) “Hispanic,” and (6) “Other [2002 only].” The results for the factor of ethnicity are recorded in *Appendix D*. The results for how much each ethnic group supported an increase of federal environmental spending are located in **Figure 4-A**. The results for how much each ethnic group supported a decrease in federal spending on the environment are located in **Figure 4-B** and the results for the different ethnic groups that supported keeping the amount of federal spending on the environment the same are located in **Figure 4-C**. Please note: There is no data for 1998 and in 2000 only, “Cut out entirely” was added as a possible answer to the ANES survey. To keep the statistics uniform, an answer of “Cut out entirely” on the survey was counted as an answer of “Decreased” for this data set. Also, “Other” was added as a possible ethnicity selection on the ANES survey in 2002. This category was included in the *Appendix C* Figures, but consequently will only reflect 2002 data.

Congressional voting information on environment-related bills was gathered from the Policy Agendas Project. The Project categorized bills based on the topic with which each bill is concerned and therefore represents the best source for this type of analysis. For the general topic of the Environment, the Project has recorded data from 1947-2008 on congressional voting patterns. Specifically, the Project recorded each bill that was introduced concerning the environment and whether or not the bill was ultimately passed by Congress. The total bills proposed from 1947-2008, according to the Project, was n=14,408 bills. The Library of Congress was consulted so as to provide some verification of the data from the Project. The Policy Agendas Project data differed from the Library of Congress records, which specified that from 1900-2013, n=11,261 bills were proposed relating to the environment. This difference is most likely due to differences in defining what constitutes “environmental legislation.”

**Table 1** in *Appendix E* records the occurrence of each type of environmental legislation over time. See the discussion of “subTopicCode” below for detailed information on how these classifications were gathered, presented, and for the meaning of each subTopicCode.

**Figure 1** in *Appendix E* displays the prevalence of environmental legislation for any given year between 1947-2008. This graph was obtained by totaling the number of environmental bills passed from 1947-2008 and then plotting that data over time (years).

All figures beginning “Figure 2-x” where “x” is a letter between A-M,display the prevalence of different types of environmental legislation over time. These figures can be found in *Appendix F*. **Figure 2-A** records the prevalence of environmental legislation that was a combination of several subtopics of environmental law, such as bills that require the protection of certain types of wildlife (subTopicCode 700). **Figure 2-B** records the prevalence of environmental legislation that relates to drinking water safety (subTopicCode 701). **Figure 2-C** records the prevalence of environmental legislation that relates to waste disposal (subTopicCode 703). **Figure 2-D** records the prevalence of environmental legislation that relates to hazardous waste and toxic chemical regulation, treatment, and disposal (subTopicCode 704). **Figure 2-E** records the prevalence of environmental legislation that relates to air pollution, global warming, and noise pollution (subTopicCode 705). **Figure 2-F** records the prevalence of environmental legislation that relates to recycling (subTopicCode 707). **Figure 2-G** records the prevalence of environmental legislation that relates to indoor environmental hazards (subTopicCode 708). **Figure 2-H** records the prevalence of environmental legislation that relates to species and forest protection (subTopicCode 709). **Figure 2-I** records the prevalence of environmental legislation that relates to miscellaneous environmental items including but not limited to wetland protection, ocean dumping, marine pollution, coastal zoning laws, and pollution in the Great Lakes (subTopicCode 710). **Figure 2-J** records the prevalence of environmental legislation that relates to land and water conservation (subTopicCode 711). **Figure 2-K** records the prevalence of environmental legislation that relates to environmental research and development (subTopicCode 798). **Figure 2-L** records the prevalence of environmental legislation that relates to a category specified as “Other” which includes the topics of environmental education, environmental citizens, and eco-terrorism (subTopicCode 799). **Figure 2-M** records the prevalence of environmental legislation that relates to Government Efficiency and Bureaucratic Oversight. (Note: this SubTopicCode, classified as “2002,” is not categorized under the general header of “Environment”, but rather under the header of “Government Operations.” See below.)

Each “Figure 2-x” in *Appendix F* was obtained by plotting a subTopicCode over time (years). Each subTopicCode corresponds to a different subset of legislation within a general topic. The codes used in this analysis include all of the subTopicCode classifications under the general header of “Environment” (rendered as “7” in the Project dataset) in addition to the subTopicCode of “2002” which is categorized under the general header of “Government Operations” (rendered as “20” in the Project dataset). The following categories of subTopicCode were used: 700, 701, 703, 704, 705, 707, 708, 709, 710, 711, 798, 799, and 2002 and correspond to the graphs above respectively (Figure 2-A corresponds to 700, Figure 2-B corresponds to 701, Figure 2-C corresponds to 703, etc.).

**Table 2** in *Appendix G* records the occurrence of environmental legislation and the medium through which it was presented in the House and Senate for the current decade (2010-2013). This information was obtained from Congress.gov--the best authoritative source available for research on when and how congressional bills are passed. The data used in this analysis was obtained through a website search for legislation under the topic of “Environment.” This search was then refined to only display bills related to “Environmental Protection” and then further to only display bills from the 111th (2009-2010) Congress to the 113th (2013-2014) Congress. Note that that this dataset will be partially incomplete as the 113th Congressional session was not concluded at the time of this writing.

**Table 4-A** in *Appendix G* records Gallup™ data concerning overall U.S. public opinion relating to the environment from 2001-2012. Five possible answers could be chosen to the survey question: “How much do you personally worry about the quality of the environment?” The five possible answers are as follows: “Great deal,” “Fair amount,” “Only a little,” “Not at all,” and “No opinion.” This data was included for the purposes of comparison (see Results and Discussion).

**IV. Results and Discussion**

The results for family income show that support of the environment of the five different income quintiles diverges and then comes back together significantly from 1984-2000. For example, in 1988 and 1996 the top two quintiles separated significantly compared to the previous year and have been decreasing in their support for the environment over time (though there was a slight increase in 2000). Every quintile except the bottom quintile (0 to 16) decreased in its overall support for the environment; the bottom quintile rose in its support for federal spending on the environment in the time series.

When looking at **Figure 1-B** and **Figure 1-C**, *Appendix A*, it is apparent that though support for increasing federal spending on the environment lessened, it appears that the support went more or less into supporting a decrease in environmental spending as opposed to keeping it the same. After 1986, support for keeping the amount of federal spending on the environment the same hovered at or around 35-40% over the time series. From 1992-1994 there is a spike in the amount of people responding that federal spending on the environment should be decreased. As expected, there is an increase in the number of respondents in favor of keeping federal spending on the environment the same from 1992-1994 and a decrease in those responding that federal spending should be increased on the environment. From 1994-1996, the opposite pattern is observed with a lessening in the number of respondents saying that federal support for the environment should be decreased or should be kept the same and a rise in the number of respondents stating that federal spending on the environment should be increased (with the exception of the top income quintile 96-100, which continued to decrease).

Overall, the relationship between income and support for the environment is somewhat obscure in that it seems to switch after 1991. From 1984-1991, as one increases in income, one is more likely to support federal spending on the environment. From 1991-2000, the opposite trend emerges. This is further puzzling because congressional voting with respect to some environmental legislation, such as recycling, increases during the 1990s (see Figure 2-F, *Appendix F*). This is likely, however, due to other factors, as will be discussed below. It is worthy to note that the low-to-middle class (income quintiles 17 to 33 and 34 to 67) appear to track very closely to each other in every survey response (increased, decreased, and stay the same) regardless, excepting perhaps the year 1996 when the two quintiles diverged significantly on support for decreasing federal funding for the environment (with the 34 to 67 quintile being more supportive of lowering federal spending on the environment).

The results for ANES political ideology (**Figures 2-A**, **2-B**, and **2-C**, *Appendix B*) showed that the more liberal one is, the more one favored an increase in federal spending on the environment. With the exception of “Don’t know; haven’t really thought much about it,” the ideologies followed an almost perfect top-down strata from liberal to conservative on increasing federal spending on the environment and conservative to liberal on decreasing and keeping federal spending on the environment the same. This suggests a strong correlation between American conservatism and support for the environment: the more conservative a person is, he or she will support decreasing federal spending on the environment.

The GSS party affiliation data (**Figures 3-A**, **3-B**, and **3-C**, *Appendix C*) differed from ANES data somewhat. It showed that the closer to center (“Independent”) and left of center (the democrat variables) one was, the more one supported an increase in federal spending. The polarized right answers (such as “Strong Republican”) showed a much lower support of increasing federal spending on the environment and a much higher support of decreasing federal spending on the environment. This deviates from ANES data in that the Independents are more in line with the Democrats than they are in the actual center in between Democrats and Republicans.

The results for ethnicity (**Figures 4-A**, **4-B**, and **4-C**, *Appendix D*) showed that Whites and Native Americans have decreased in the support for the environment, though whites seemed to support keeping the same amount of federal spending on the environment rather than decreasing it. Blacks, Asians, and Hispanics have continued in more or less the same pattern of moderately high support for the environment from 1984-2002. Particularly interesting is the fact that Native Americans have very low support for increasing federal spending on the environment and high support for decreasing federal spending on the environment. With the Native American focus on nature and the spiritual significance of the natural world, it is surprising to find this group so reluctant to increase federal government spending on the environment. Or perhaps, due to the strenuous past relationship between the Native American people and the U.S. federal government could lead Native Americans to reject any sort of federal government proposal. Note that the category “Other” was only an option for the year 2002.

GALLUP™ poll data (**Table 4-A**, *Appendix D*) shows that over approximately the last decade, public concern for the environment has not significantly changed—staying between 34% and 42% of those answering that they have worried about the environment a “Great deal.” This contrasts with the literature review, which argued that in recent times public awareness and support of the environment has risen.

**Table 1**, *Appendix E*contains all of the SubTopicCode classifications and their prevalence for each year from 1947-2008. This table was included so that the reader my reference any particular year and locate, in number form, the prevalence of a given SubTopicCode within that year.

Of the 13 different subtopics, there were only two types of environmental legislation that dropped to at or near zero and consistently remained at that level: General environmental legislation (SubTopicCode 700) and Other environmental legislation such as eco-terrorism and environmental citizenship (SubTopicCode 799). All other subtopics remained relatively high after the beginning of environmental legislation in 1967-1970. This is likely due to the unusual nature of SubTopicCode 700 and 799—very few incidents occur in the United States related to such things as eco-terrorism, for example. Reasons for the lack of environmental legislation concerning SubTopicCode 700 and 799 are discussed further below.

Environmental subtopic composite legislation (**Figure 2-A**, *Appendix F*), though significantly peaking in 1970, actually peaked highest in 1967. This is likely due to some of the preliminary pieces of environmental legislation passed in the areas of Drinking Water Safety, Air pollution, Indoor Environmental Hazards, Species and Forest Protection, and Land and Water Protection that were passed during the same period of time (see **Figures 2-B**, **2-E**, **2-G**, **2-H**, and **2-J**, *Appendix F*).

Environmental legislation pertaining to Drinking Water Safety (**Figure 2-B**, *Appendix F*) peaked in 1971 and has remained steadily present at approximately 20 bills per year since then. The structure of **Figure 2-B**, *Appendix F*closely resembles that of the overall trend in **Figure 1**, *Appendix E* and consequently drinking water safety seems to have remained in the minds of congressmen and congresswomen since 1970-1971. The reasons why drinking water safety has not legislatively spiked since 1971 is most likely due to the passage of the Resource Conservation and Recovery Act (RCRA) in 1970. This piece of legislation contains most of the Environmental Protection Agency standards concerning drinking water safety. It has been amended twice (see discussion of waste disposal legislation below) and consequently little independent legislation is likely needed on the topic of drinking water safety since RCRA was passed. The Resource Conservation and Recovery Act also contains most of the legislation relating to underground storage tank (UST) leakage and regulation (a large drinking water health threat). RCRA has been a very successful piece of legislation, thereby requiring little need for extra drinking water safety legislation (Environmental Protection Agency, 2012).

Though peaking in 1971-1972, Waste Disposal legislation (**Figure 2-C**, *Appendix F*) was present before the onset of the environmental era. It seems as though waste disposal legislation began in 1950. This is likely due to the health concerns of waste and the pressing need to dispose of waste. From 1972-1986, waste disposal legislation prevalence in Congress declined to 10-20 bills per year; however, this type of legislation experienced a period of increased prevalence from 1989 and ending in 1996. The Resource Conservation and Recovery Act (RCRA) is the key U.S. legislation pertaining to waste disposal. It was passed in 1970 and was amended by the Federal Hazardous and Solid Waste Amendments (HSWA) in 1984, the Federal Facility Compliance Act in 1992, and the Land Disposal Program Flexibility Act in 1996 (Environmental Protection Agency, 2012). This does not explain why the prevalence of waste disposal legislation increased from 1989-1996, however it does explain why it ended. With the passage of the final set of amendments, waste disposal naturally should have seen a decrease since amending RCRA satisfied major waste disposal problems.

Hazardous Waste and Toxic Chemical Regulation, Treatment, and Disposal legislation began in 1971 (**Figure 2-D**, *Appendix F*) and steadily increased, peaking in 1987, until 1998-1999 when legislation began to decrease concerning hazardous waste and toxic chemicals. From 1999 onward, Congressional passage of this type of legislation has remained relatively high. This is most likely due to the rapid development of new chemicals in the 21st century. New chemicals require new reporting structures and regulations to be implemented.

The prevalence of Air pollution, Global Warming, and Noise Pollution legislation (**Figure 2-E**, *Appendix F*), as expected, began in 1970 and has remained high since then, varying between approximately 15-50 bills per year. This is to be expected for two reasons. First, air pollution was one of the primary concerns of the 1970s that sparked the environmental movement, thus one would expect to see a high prevalence of air pollution over time in the United States. Second, global warming has thrust itself to the forefront of the minds of the citizens and governments and countries all over the world, and thus it is to be expected that global warming legislation would increase over time and remain popular.

The prevalence of Recycling legislation from 1947-2008 (**Figure 2-F**, *Appendix F*) is one of the most fascinating figures from this analysis. Recycling legislation peaked in 1973 and 1991—almost 20 years apart—with the higher peak occurring in 1991. In the interim years, 1974-1990, recycling legislation prevalence actually dropped to 0 in 1982 and 1986. Thus, a strong double peak is seen with respect to this particular type of legislation. While the beginning of the environmental movement in the 1970s can be credited for the prevalence of recycling legislation in the 1970s, what caused the spike from 1988-1991? This is most likely due to a barge freighter, loaded with trash, which traveled up and down the East Coast of the United States searching for a place to dump its cargo. The lack of a location for this barge to expunge its waste load sparked a public debate about waste management and served to restart the country’s interest in recycling programs (The Economist, 2007).

Legislation relating to Indoor Environmental Hazards (**Figure 2-G**, *Appendix F*) shows very little or no consistent behavior on the part of Congress. Legislation relating to indoor environmental hazards (such as lead, asbestos, and volatile organic compounds) largely began and peaked in 1969 with 23 bills and 1971 with 20 bills. After this, bills related to indoor environmental hazards dropped to by 1973-1974. With little consistency, bills related to this type of environmental legislation fluctuated greatly from 1975-2008. From 1985 to 1993 there seemed to be a rise in the popularity of this kind of legislation, though it dropped back to 0 by 1994. From 2003-2008, approximately 5 bills on average were passed relating to indoor environmental hazards. The Clean Air Act of 1970 and the Toxic Substances Control Act of 1976 contains some regulations that relate to indoor environmental hazards, but having both been passed in 1970, it does explain the erratic passage of this type of legislation on the whole.

Species and Forest protection legislation (**Figure 2-H**, *Appendix F*) peaked in 1971 though this kind of legislation had been prevalent since before 1947. This is most likely due to the conservation practices of President Theodore Roosevelt and Gifford Pinchot, the first director of the United States Forest Services in addition to the environmental work of John Muir and Aldo Leopold, whose efforts centered on arguing for the intrinsic value of the natural world (D. Ippolito, personal communication, December 2, 2012). This type of legislation has remained prevalent at an approximate average of 50 bills per year since 1980. The deforestation and biodiversity concerns related to global warming have doubtless contributed to the continued passage of legislation of species and forest protection.

Preservation of Wetlands, Ocean Dumping, Marine Pollution, Coastal Zoning, and Great Lakes Protection (**Figure 2-I**, *Appendix F*) is a SubTopicCode with no particular identifying category name. The Policy Agendas Project description reads:

“710: Examples: preservation of wetlands, regulation of ocean dumping, pollution from cruise ships, marine plastic pollution control, marine sanctuaries appropriations, pollution in the Chesapeake Bay, protection of coral reef systems, Columbia river water pollution, coastal barrier improvement, coastal erosion and management, federal and state coastal zone protection policies, toxic pollution in the great lakes, regulation of the incineration of hazardous wastes at sea, oil spills.” (PolicyAgendas.org, 2013b)

Therefore, this category contains many unrelated topics and types of legislation that makes describing the trend-line for **Figure 2-I**, *Appendix F* somewhat difficult. Generally, it appears that SubTopicCode 710 relates to regulations of the United States’ marine and Great Lakes resources. Peaking in 1971, this SubTopicCode area has remained relatively high, maintaining 20-40 bills per year from 1972 onward.

Land and Water Conservation legislation was popular well before 1971 as indicated by **Figure 2-J**, *Appendix F*. This type of legislation did peak in 1971 and 1973, but has remained steadily popular through 1974-2008. The popularity of land and water conservation prior to 1971 is most likely due once again to the conservationist practices of President Theodore Roosevelt and Gifford Pinchot. Both of these men were pragmatic utilitarian conservationist. This meant that they believed in achieving the greatest good for the great number of people with respect to conserving land and water in the United States. Much of this was accomplished through Gifford Pinchot’s multiple use land policies that were enacted through the United States Forestry Service (D. Ippolito, personal communication, December 2, 2012). The efforts of these men are a likely explanation for the continued governmental conservation of land and water (in the form of legislation).

**Figure 2-K**, *Appendix F* demonstrates the fluctuating nature of environmental Research and Development. Peaking in 1970 and 1993, it is apparent that this form of legislation has enjoyed periods of prominence and periods of apathy with respect to environmental voting. However, in dispute of that idea, it is also apparent that this type of legislation was popular prior to the 1970s. From 1997 onward, environmental research and development has steadily remained at an average of 5 bills per year.

SubTopicCode “799” (**Figure 2-L**, *Appendix F*) was categorized as “Other” by the Policy Agendas Project and included “Environmental education, environmental citizens, eco-terrorism” (PolicyAgendas.org, 2013b). This area of environmental legislation peaked very high during 1969 and then subsequently dropped to near 0. This type of legislation has remained near 0 since 1970 with one brief exception in 1975. In fact, there are several spans of years in which no legislation was passed concerning this year (see 1981-1984 and 1987-1989 for example). This trend is likely due to the rare occurrence of problems with respect to the topics of Environmental education, environmental citizens, and eco-terrorism in the United States.

SubTopicCode “2002” is actually categorized under “Government Efficiency and Bureaucratic Oversight” at the Policy Agendas Project, not the “Environment” category. This SubTopicCode relates to legislation designed to improve government efficiency and cross-department functionality issues (PolicyAgendas.org, 2013b). As **Figure-M**, *Appendix F* demonstrates, environmental legislation that related to government efficiency and bureaucratic oversight, as per the Policy Agendas Project definitions of such legislation, only occurred in 1949 with 2 pieces of legislation.

In sum, family income appears to have an effect on the U.S. public’s support for increasing federal spending on the environment, but the particulars of that relationship are unclear and seem to depend on the circumstances of a particular time frame. Political ideology and the U.S. public’s support for increasing federal spending on the environment has a very defined and predictable relationship: the more liberal one is, the more one supports federal spending on the environment. As far as ethnicity is concerned, it seems that Blacks, Asians, and Hispanics are the most supportive of the environment with whites being the least supportive. In addition, there is the surprising lack of support for the environment from Native Americans possibly due to a variety of previously discussed reasons. Over the last decade, U.S. public worry about the environment has stayed roughly the same.

As a whole, Congressional voting with respect to the environment has increased over time (**Figure 1**, *Appendix E*). It is apparent that environmental legislation was relatively unpopular leading up to 1970. After that date, Congressional bills related to the environmental reached almost 1000 bills, indicating the force with which the environmental era began. Trending downwards from 1973-1981, environmental legislation averaged to approximately 200 bills per year from 1981-2008. It must be remembered that many states began legislating at the same time or slightly after the federal government. Also, as certain figures demonstrate, such as **Figure 2-F**, *Appendix F*, it is apparent that environmental legislation was most popular in Congress during two periods of United States history: the 1970s with a resurgence of interest in environmental concerns in the 1990s. **Figure 1**, *Appendix E* also indicates that the United States still considers, on average, 200 bills per year.

**Table 2**, *Appendix G*indicates that since the beginning of the 21st century, the Senate has passed more environmentally related bills than the House of Representatives. Indeed, the Senate considered 142 more bills than the House. A variety of explanations could be offered for this observation. The most likely would the understanding that the Senate, with longer term limits, is more shielded by public sway and consequently would be more likely to take action on topics such as the environment due to their individual preferences. In addition, the Democrats have controlled the Senate since the turn of the century whereas the House changed from Democratic to Republican control between the 111th Congress and the 112th Congress. As discussed earlier, liberal political affiliation correlates with greater support for the environment and thus it would be expected that the more Democrat-filled house of Congress would offer more environment-related legislation.

**Table 3**, *Appendix G*, provided to correlate Congressional concern for the environment with public opinion concerning the environment, shows that public concern for the environment has not significantly changed. From 2001-2012, public opinion has remained between 62% and 77% for those answering that they have worried about the environment a “Great deal” and a “Fair Amount.” This indicates that the public is maintaining a high concern for the environment. Congress has arguably kept up with this demand by passing on average 200 bills per year in agreement with the expectation laid out in the introduction to this work.

In conclusion, family income does affect environmental attitudes of U.S. citizens. Specifically, as income increases, environmental concern decreases, despite the slight divergence between ANES and GSS data. American conservatism correlates to a decrease in support for the environment. Blacks, Asians, and Hispanics are supportive of the environment whereas whites and Native Americans (surprisingly) are less supportive of the environment.

Congress has become much more environmentally concerned over time, especially during and since the 1970s. It important to note, however, that due to the efforts of some such President Theodore Roosevelt and Gifford Pinchot, some environmental legislation was popular before 1970s such as species and forestry protection and land and water conservation. In addition, it seems that environmental legislation enjoyed the most popularity during the 1970s and experienced a resurgence of popularity during the 1990s.

Topics for further research include a deeper analysis of each of the SubTopicCode areas to ascertain why some were more popular than others. For example, why does there appear to be little to no consistency to indoor environmental hazard legislation over time? Research to answer that question was beyond the scope of this work.

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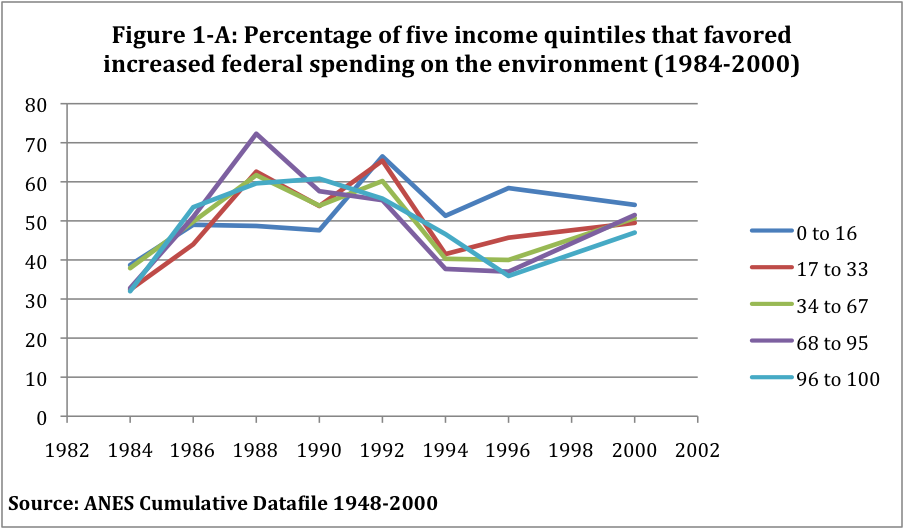
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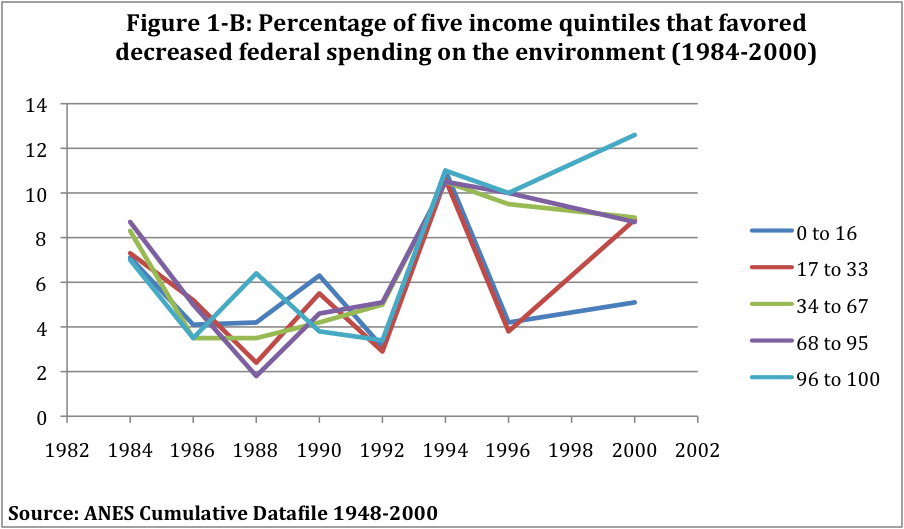
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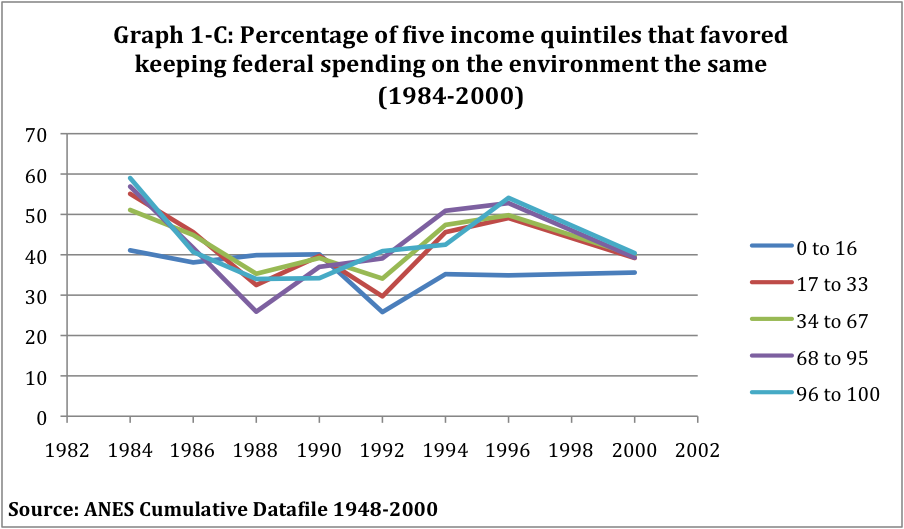
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**VI. Appendices**

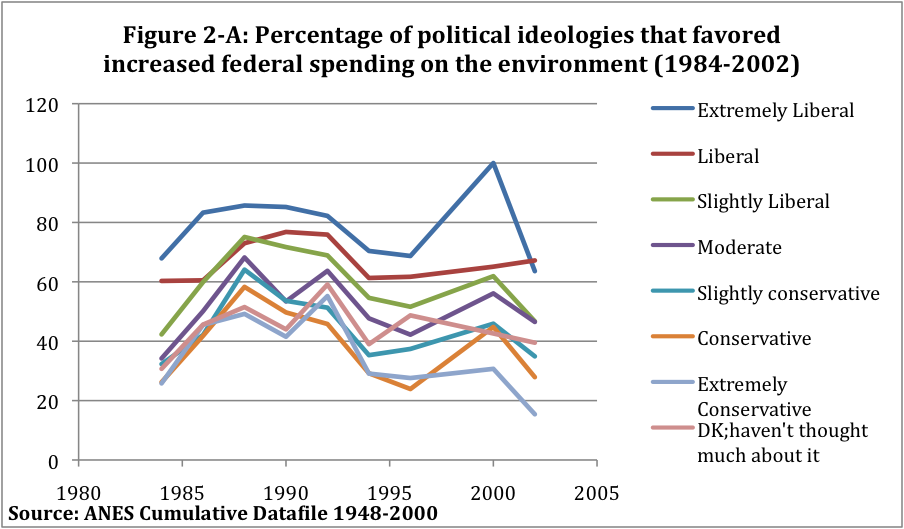
Appendix A (Family Income)

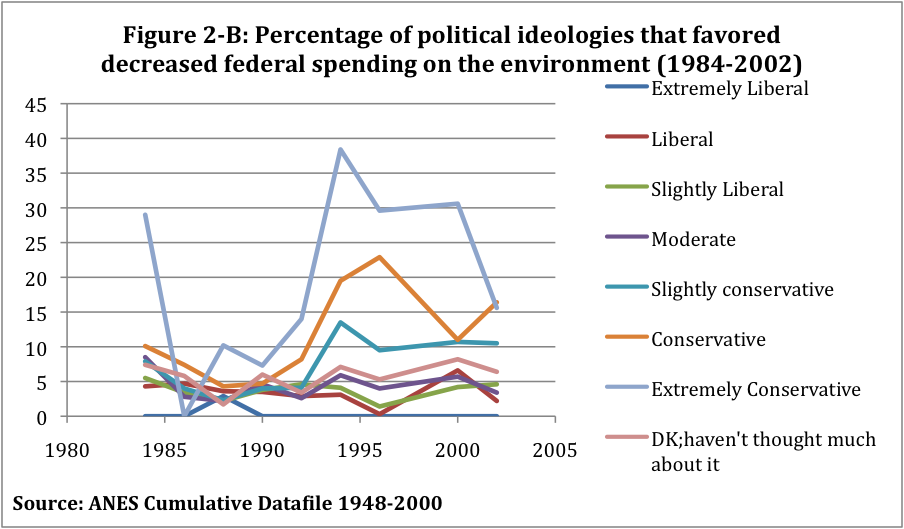


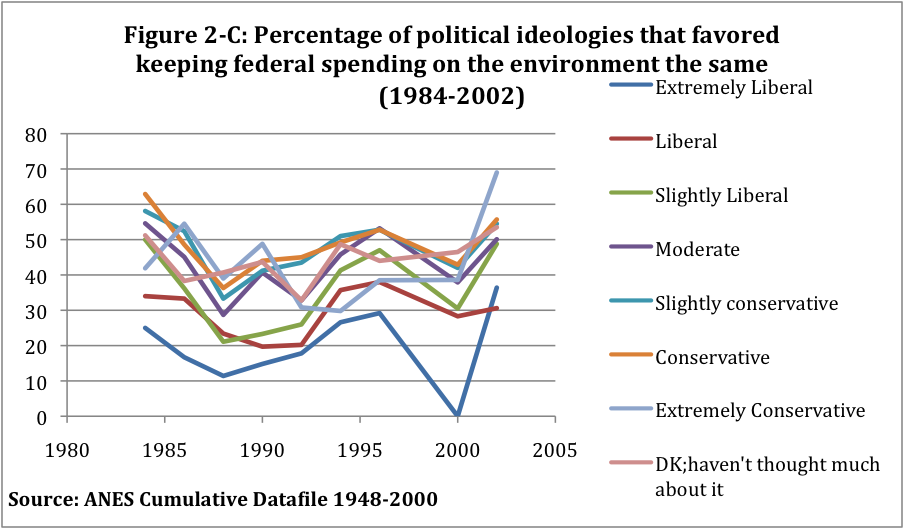




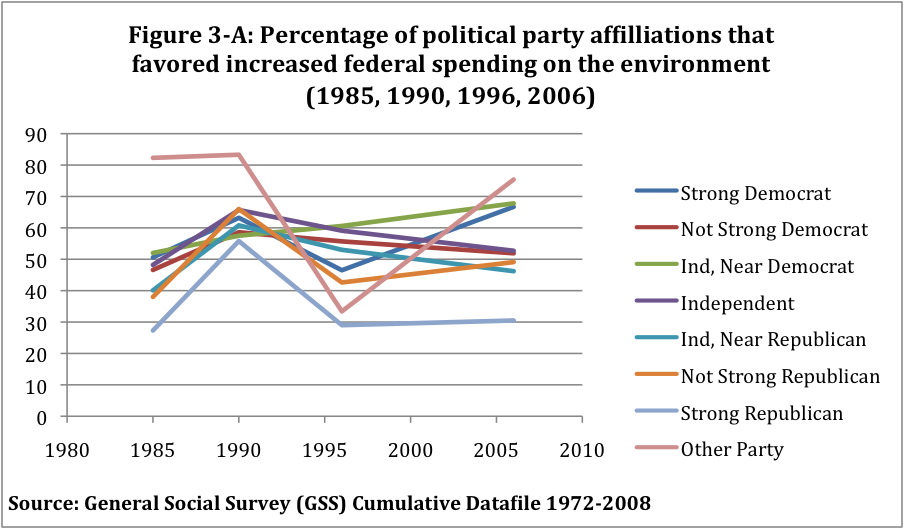
Appendix B (Political Ideology)

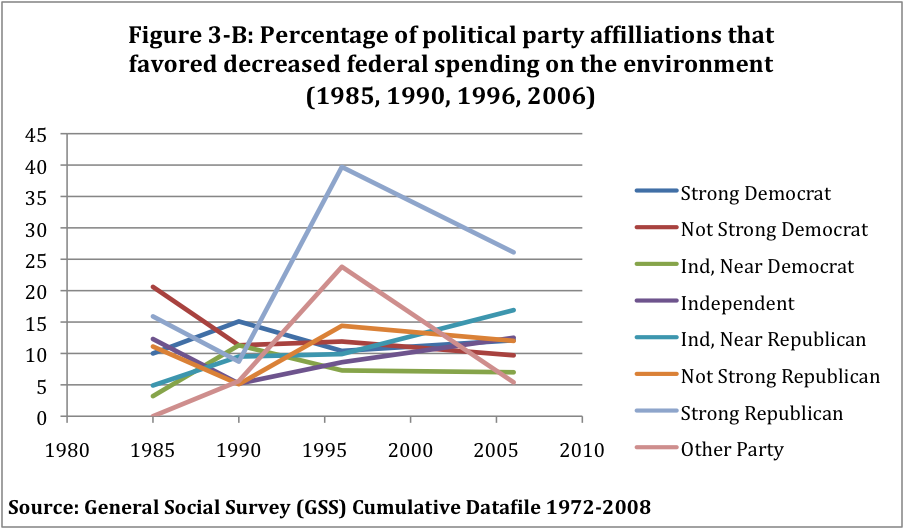


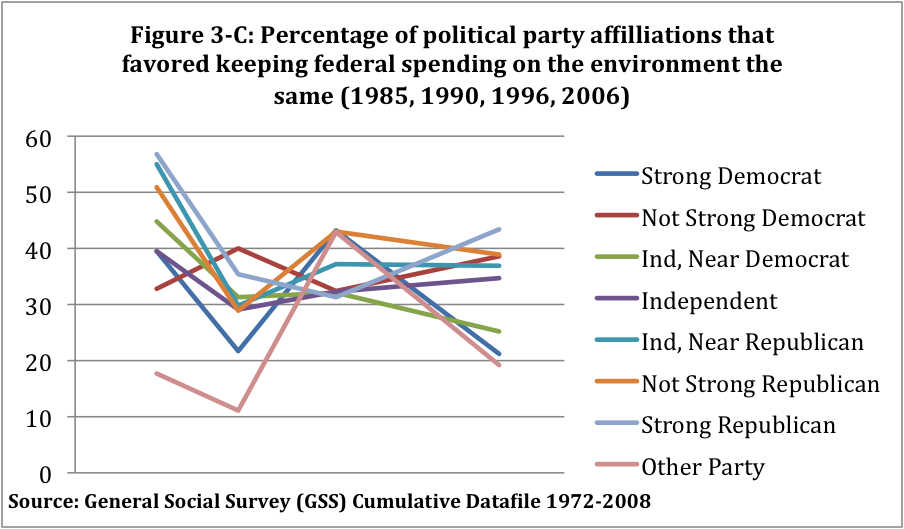




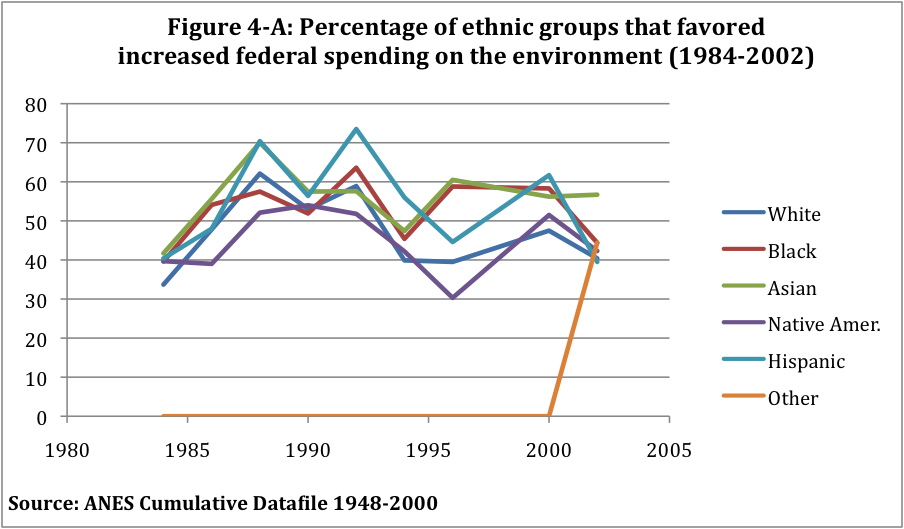
Appendix C (Party Affiliation)

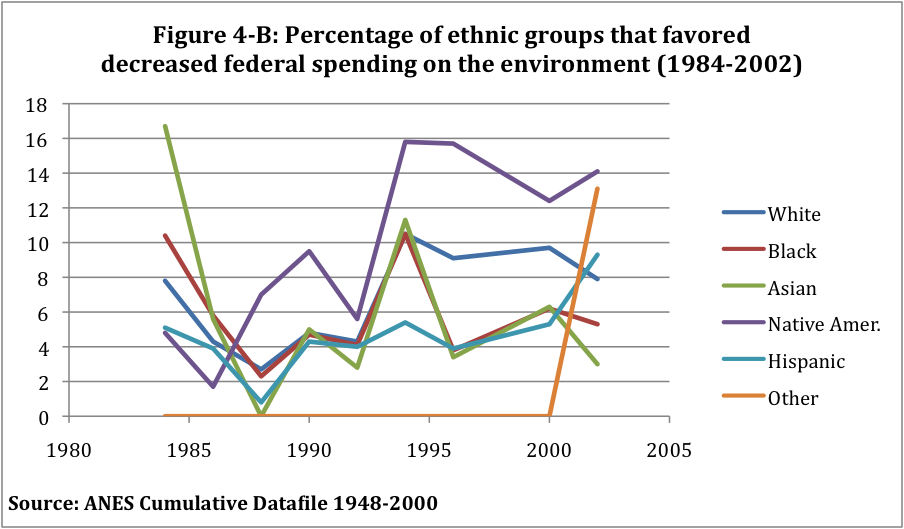


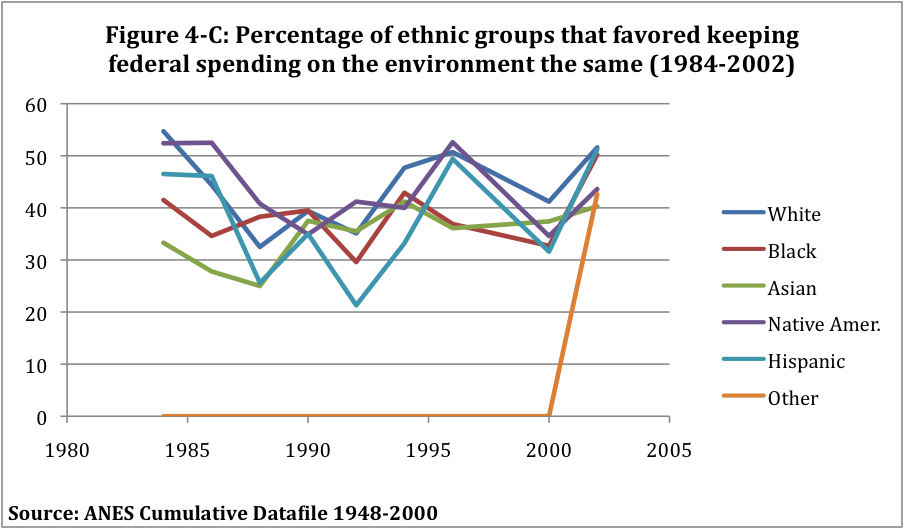




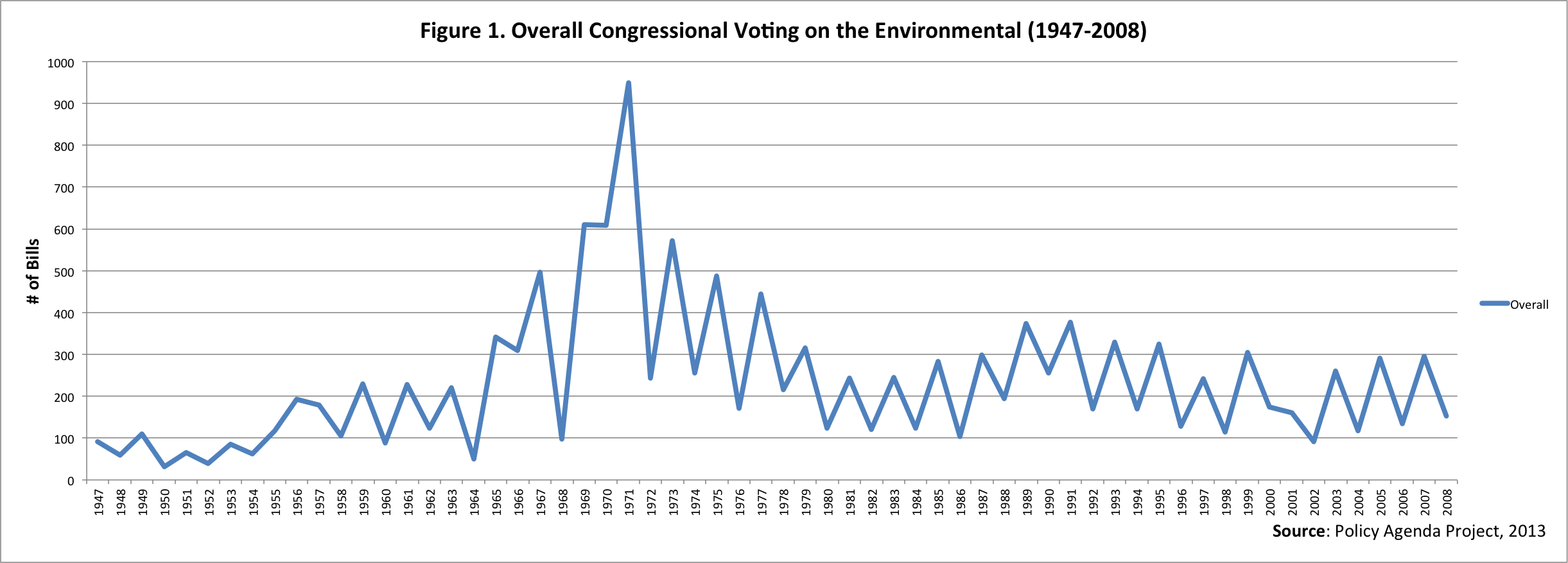
Appendix D (Ethnicity)



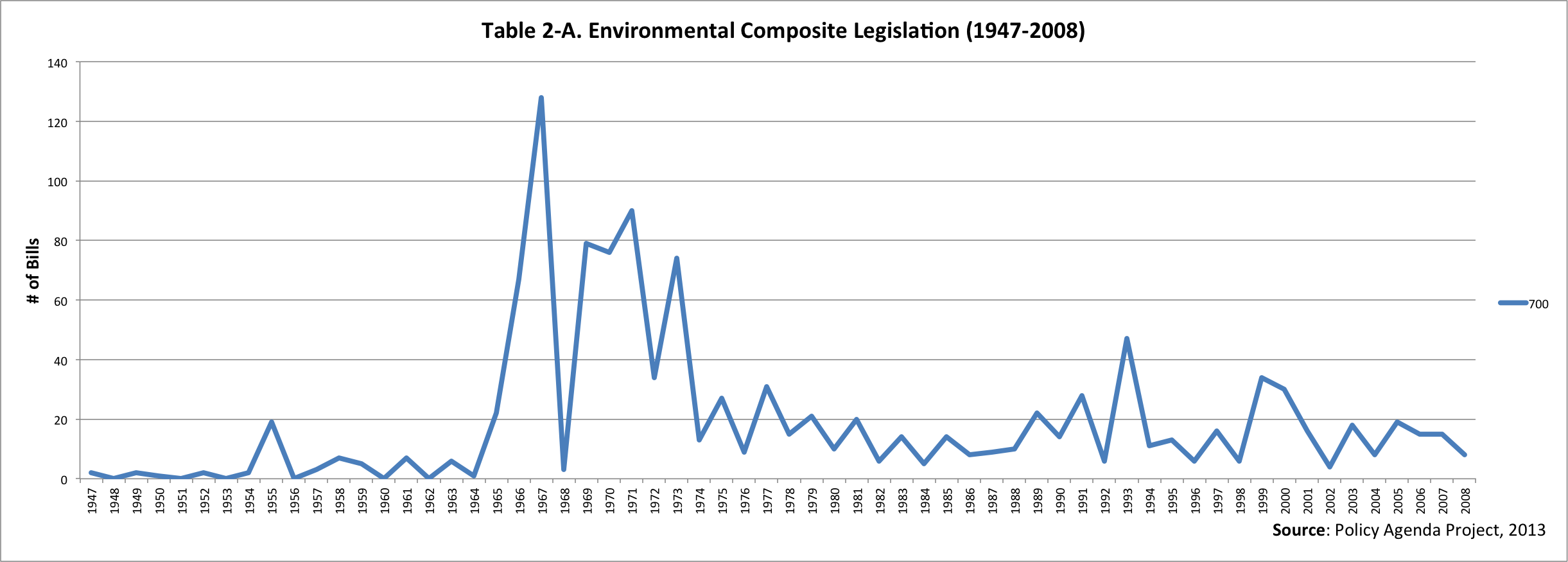


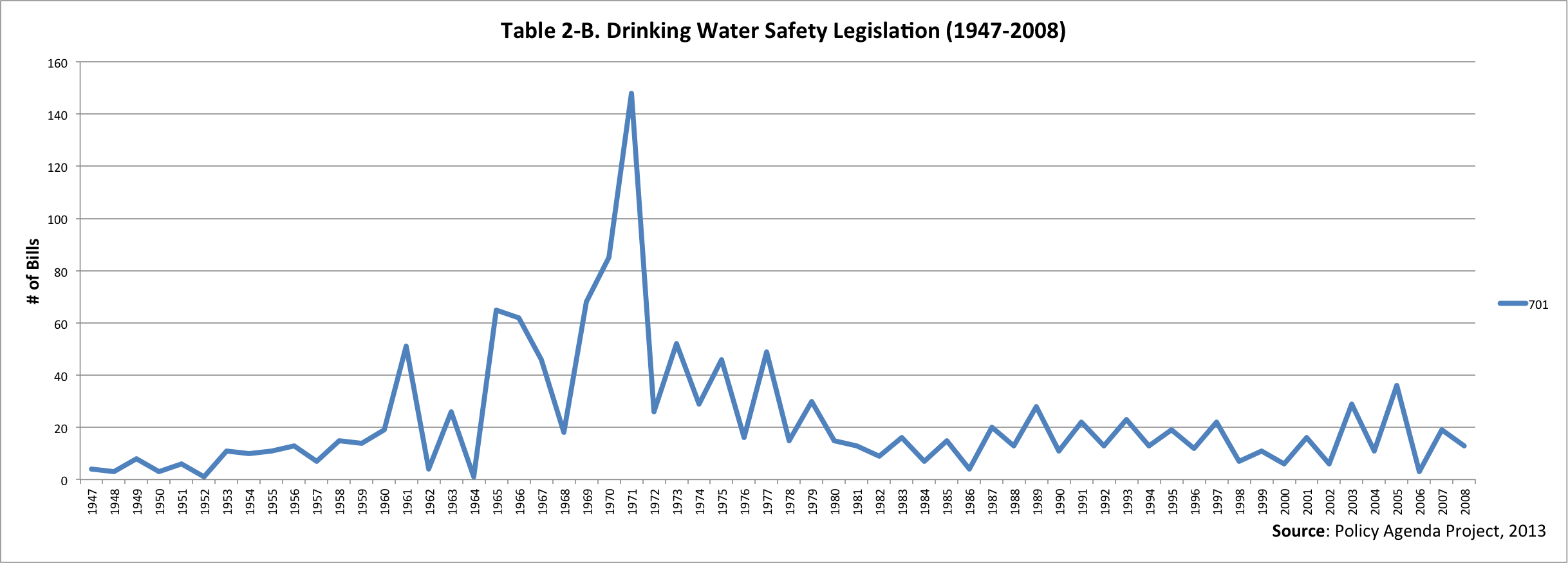


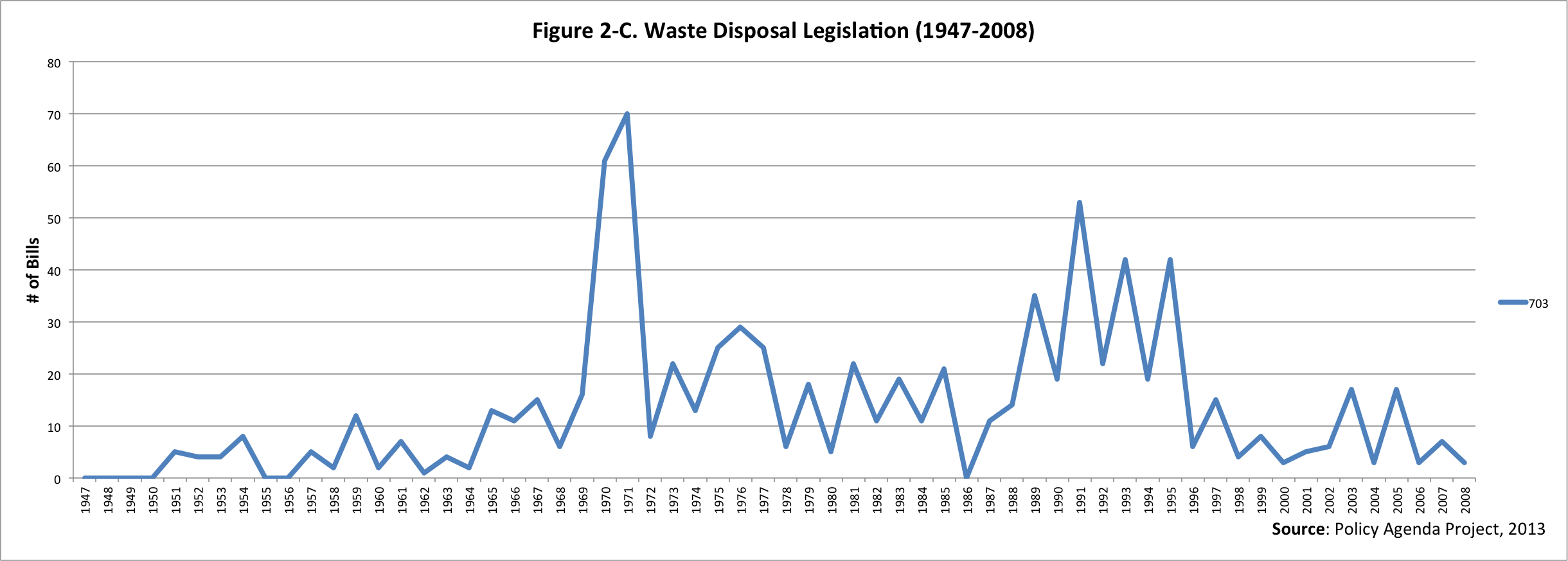
Appendix E (Congressional Voting on the Environment Over Time)

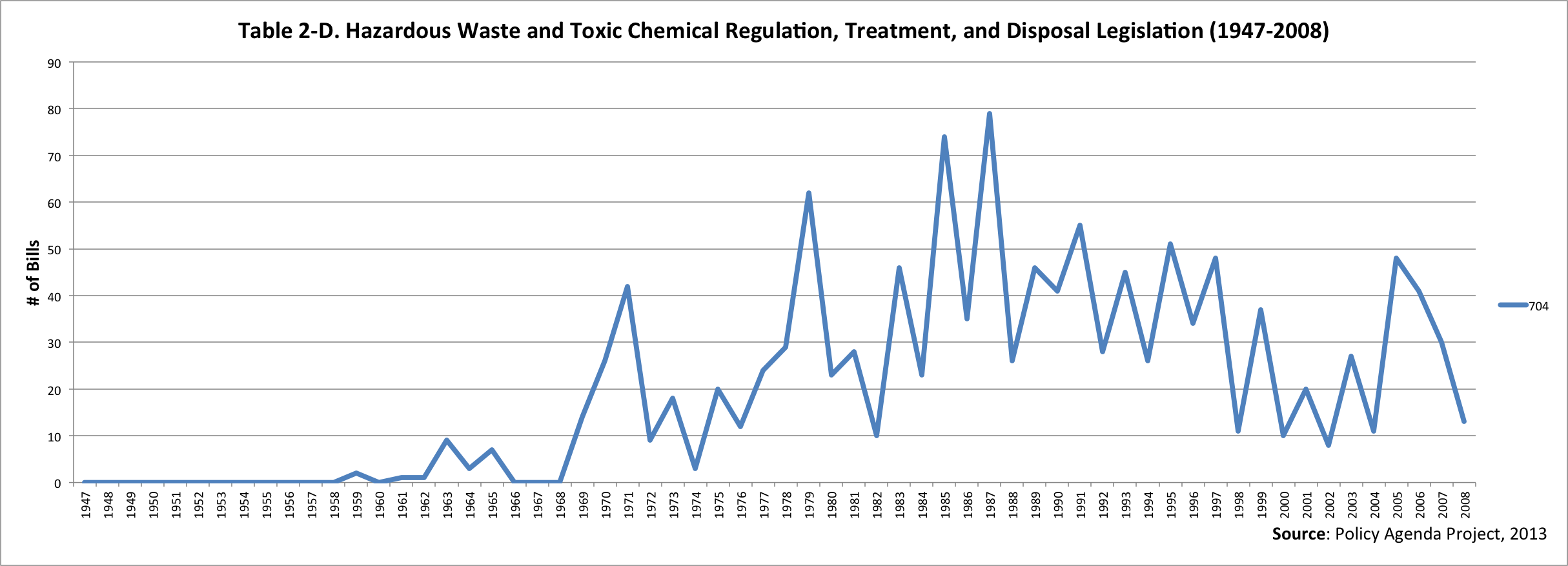


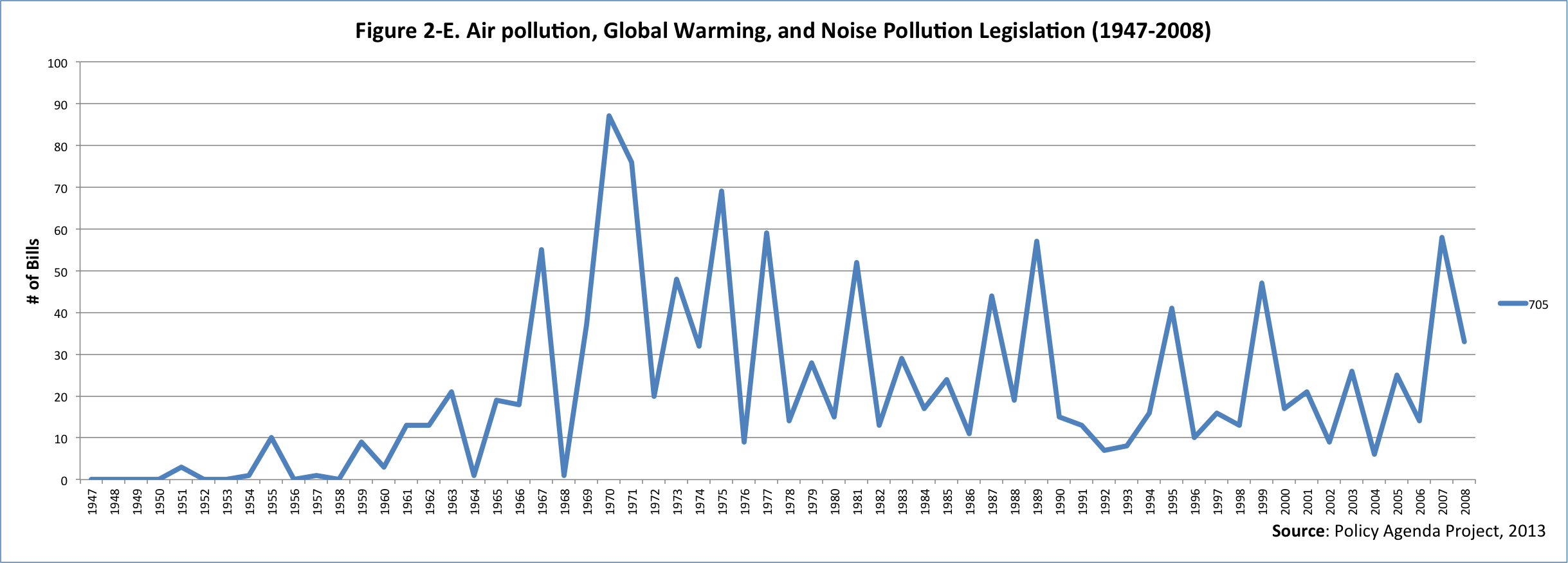
Appendix F (Various Environmental Legislation Over Time)

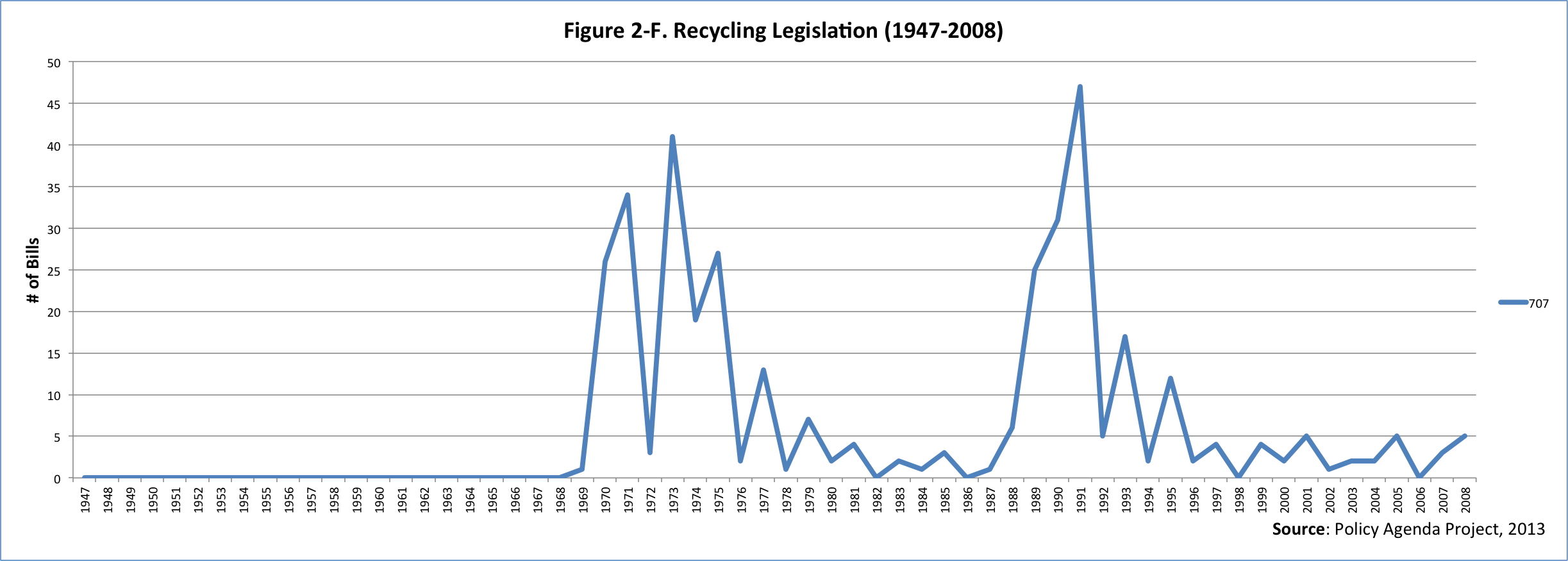


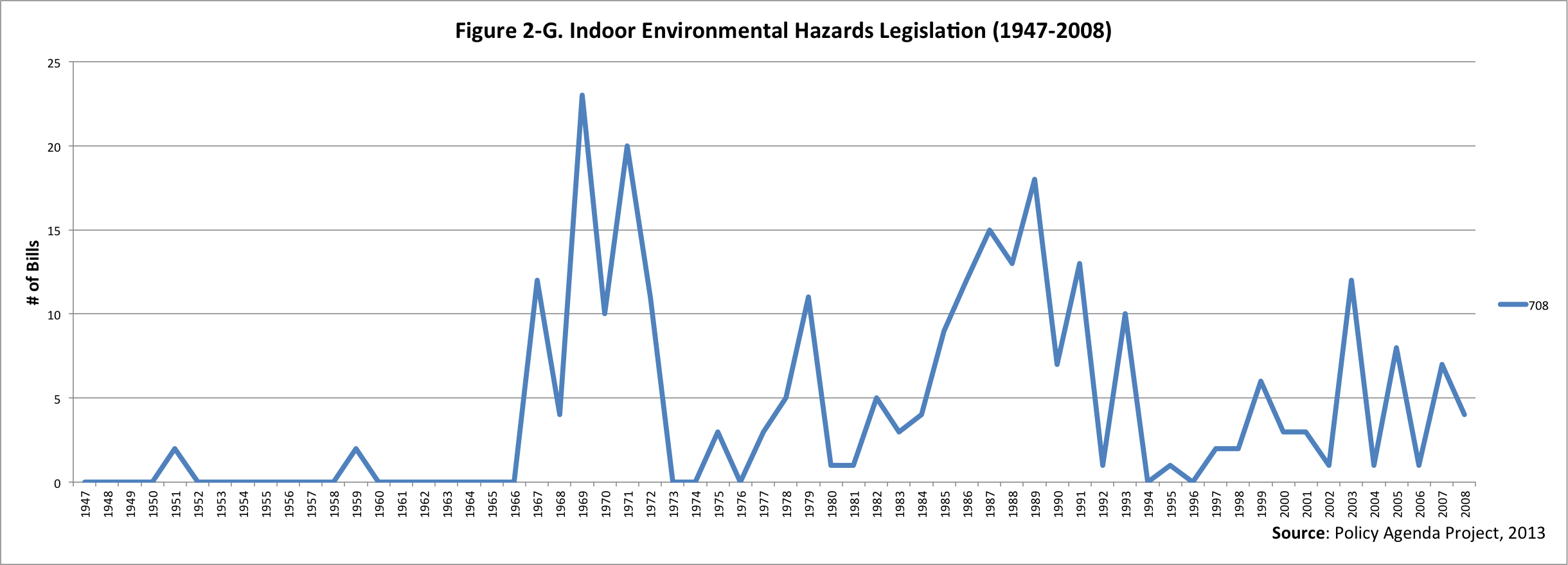


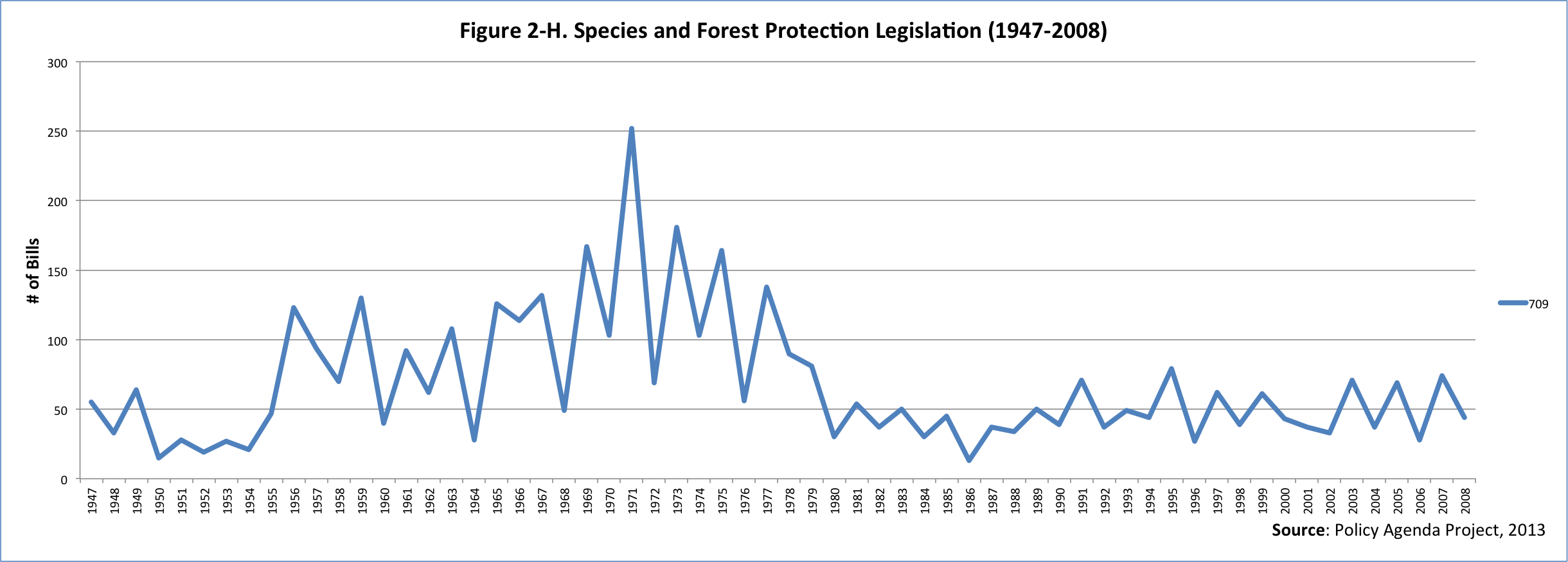


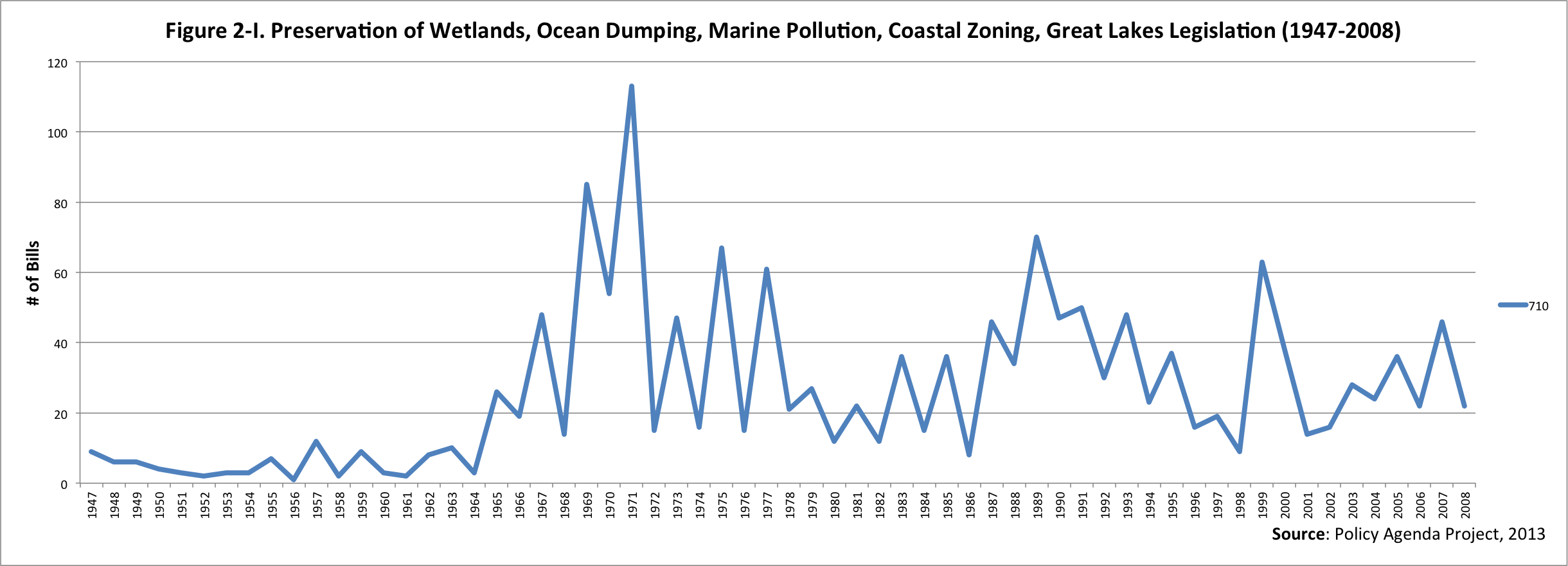


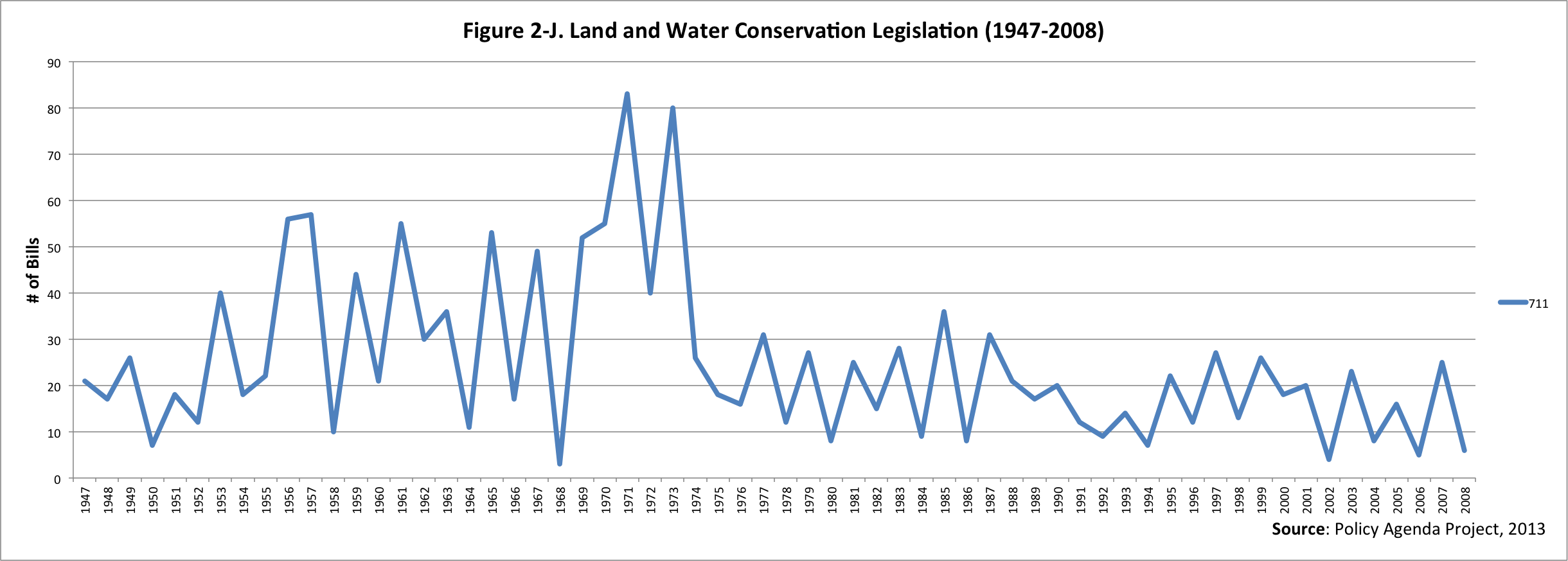


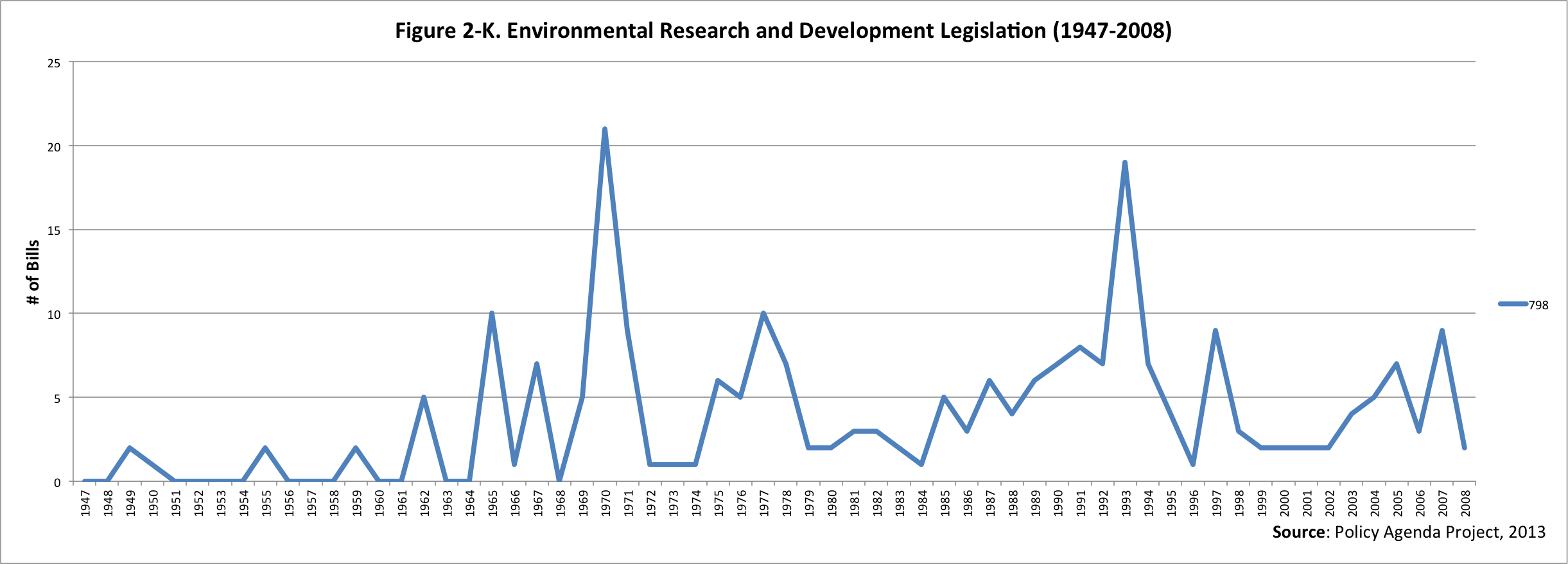


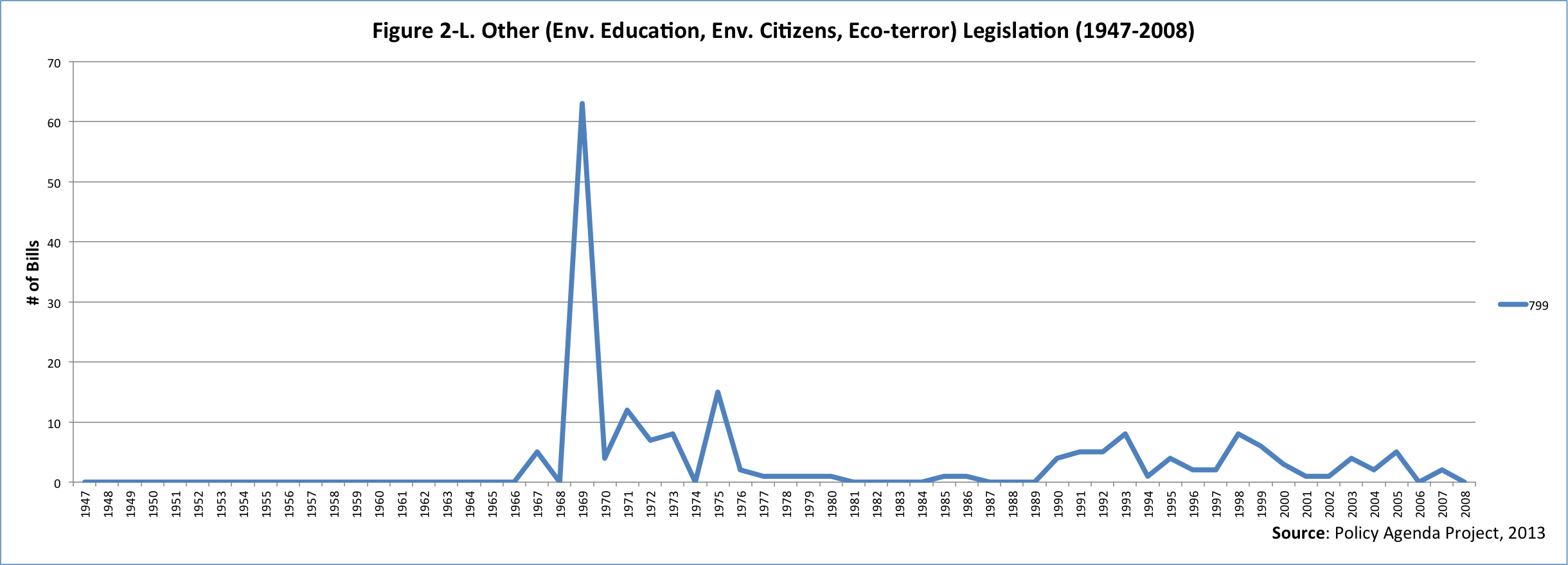


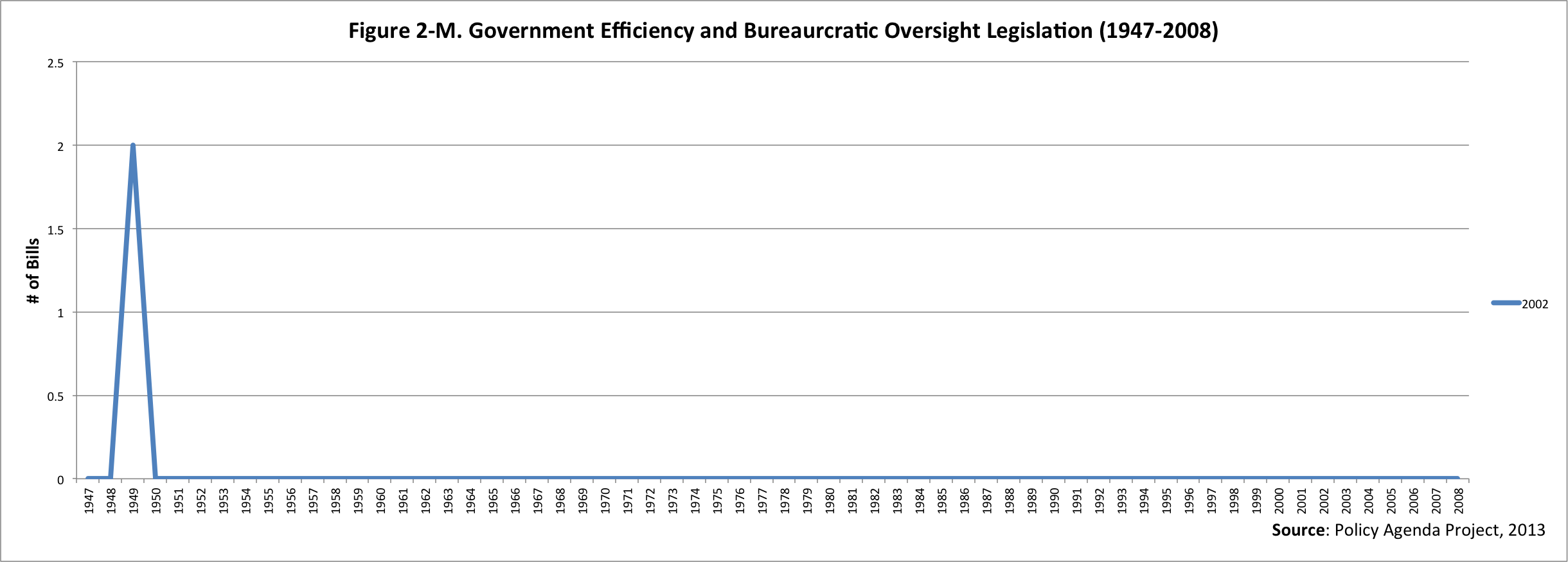












Appendix G (Prevalence of Environmental Legislation in Each House)

