

Policy Communication Toolbox: Example of Trout Conservation and Fishing Regulations

| | |
|-----------------------------|---|
| <p>Authors</p> | <p>Edward Asante Garrett Richards (Editor: Rajib Biswal)</p> |
| <p>Partner Organization</p> |  <p>Indian Bay Ecosystem Corporation https://indianbayecosystem.com</p> |
| <p>Summary</p> | <p>Environmental policy matters must gather sufficient attention to enter the public policy agenda and then be successfully translated into appropriate regulations. Afterward, those regulations must be communicated broadly in order to have the intended effect. The conservation of declining animal species, such as trout, is no exception to this process. The Indian Bay Special Trout Management Area is a region in the northeast of Newfoundland where restrictions on trout fishing are greater than in other regions (i.e., lower daily bag limit; possession limit equal to daily bag limit). In 2019, the Area was expanded. This development has been communicated in the province’s yearly Anglers’ Guide, but what other cost-effective methods are available for communicating such policy changes to anglers? This project explores policy communication options for fishing regulations through a jurisdictional scan of approaches in other provinces. The end result is two recommended communication tools for the Indian Bay Ecosystem Corporation (i.e., a public information campaign and compliance simulation video). However, the findings are relevant to policy communication challenges in general.</p> |

Note about EPILab

The [Environmental Policy Innovation Lab](#) (EPILab) is an initiative of the [Environmental Policy Institute](#) (EPI) at Memorial University’s Grenfell Campus in Corner Brook, Newfoundland and Labrador, Canada. The lab is a space for innovation and collaboration around environmental policy thinking and research, which draws on the expertise of faculty members, postdoctoral researchers, and graduate students to address various research needs for mutual gain across EPI and its external partners.

1. CONTEXT AND METHODS

This report responds to a query posed by the Indian Bay Ecosystem Corporation (IBEC), a non-profit community-based environmental organization in Newfoundland and Labrador (NL). The overall purpose of the project is to identify and compare options for communicating policy change. IBEC's goal is to protect the Indian Bay watershed (located in the northeast of Newfoundland) through research, community engagement, and sound stewardship. Related to this conservation effort, a Special Trout Management Area has been designated in the Indian Bay region, enacting extensive restrictions on local trout fishing. This Area was expanded in 2019 and the change has been communicated in NL's yearly Anglers' Guide, available online. Nonetheless, to increase community participation and compliance with fishing regulations in the Indian Bay area, IBEC seeks to understand other options to communicate this policy change.

The authors prepared this report from information gathered through the review of various government and non-government documents, peer-reviewed



Photo: Indian Bay. Courtesy of IBEC.

journals, and online databases. The search included keyword combinations such as “policy” or “regulation” plus “communication” or “advertising” plus “tools” or “instruments”. Databases included Google, Google Scholar, and Scopus. Analysis and synthesis of the information collected from these sources led to the results detailed below.

2. POLICY COMMUNICATION DEFINITIONS AND THEORY

A policy, once enacted, must be communicated to the appropriate citizens through different tools and methods of communication. Policy actors must consider which communication tools are suitable for reaching their intended audience. According to Conway (2001, p. 3), “communication [is] simple yet complex, easy to do yet easy to blunder”. Policy communication may lead to tensions and conflicts when inappropriate or improper strategies and mechanisms are employed in transmitting information, not to mention that time and resources could be wasted on ineffective approaches.

Howlett (2009, p. 24) defines government communication as instruments that draw on information the government has access to as a central policy actor, used to influence desired actions from citizens. Most scholarly literature describes policy communication similarly, emphasizing the actions of government. However, many government communication strategies may be relevant options for other policy actors (e.g., non-government organizations) as well.

Regarding communication options, Howlett et al. (2009, pp. 116-119) theorize a range of strategies based on the government's position as a central policy actor: information campaigns, advice and exhortation, benchmarking and performance indicators, and commissions and inquiries. This categorization is useful; for instance, it highlights the difference between general information provision and more direct attempts to influence public behaviour, called exhortation. However, the other categories mentioned are more about information gathering than the information release that this report is concerned with, and the number of specific examples listed under any of the categories is limited. So, to understand the scope of communication tools available, we should move beyond theory to real-world examples and successes of communication tools. We explore this topic in the next section, focusing on fishing regulations.

3. POLICY COMMUNICATION TOOLS IN ACTION

Websites

The use of websites is one of the most widely acknowledged and practiced mediums of communication in this day and age. A good example for policy communication, according to Conway (2001), is the website used by the Oregon Sea Grant and the Women's Coalition for Pacific Fisheries to inform anglers of policy changes. This website published news on the fishing industry, seafood, fishing management, and issues related to safety and families. Benefits of the website included: increased participation from the target audience, decreased isolation due to

the cross-community nature of the site, and mitigating power dynamics within the fishing community through more equitable access to information.

A survey report on improving communication about sport fishing in Alaska indicated that the most common source of information used by anglers to find sport fishing regulations were websites, followed by paper booklets (Escher and Case, 2018). Both of these examples from the US demonstrate the use of websites as an effective and common tool to communicate policy information.

As a Canadian example, all recreational fishing guidelines in British Columbia get updated through a "regional synopsis" on the appropriate website every two years, and anglers are expected to read and follow the updated fishing protocols (Government of British Columbia, 2021).

Other Digital Approaches

While websites are a widespread policy communication tool, other digital methods such as emails and text messages can also be used to inform citizens. For instance, the US-based Organization Vineyard Wind regularly sends emails and texts to anglers affected by their offshore wind energy projects (Bank and Peckar, 2019). One challenge with this form of communication is the requirement to collect contact information or get permission to use contact information for a new purpose.

Social media is becoming increasingly popular for policy communication and offers several advantages: new information can be disseminated quickly, audience interactivity with the information is high, and data about the

effectiveness and reach of the communication can be collected easily (Gong et al., 2022). For example, a social media communication strategy around a “zero-waste city” environmental policy in China demonstrated an extensive reach, with the rate of posts and comments continuing to increase over time, although a substantial amount of the attention was negative (ibid.).

One novel communication method is the use of a smartphone app. According to a survey conducted in Alaska, most respondents favoured using an app to share information on recreational fishing regulations (Escher and Case, 2018). Survey answers also revealed desired features of the app, such as: detecting local recreational fishing regulations in one’s present location, searching for regulations by species, and purchasing of licenses. A smartphone app is a convenient tool for informing people about fishing regulations, but it may not be cost-effective to develop if the target audience is small.

Public Information Campaigns

Public information campaigns are also widely used by governments to inform the public about various policies or reforms. Such campaigns intend to achieve specific outcomes across a large group of people over a target period of time through a planned set of communication activities (Weiss et al., 1994). While not a communication medium in itself, a public information campaign is a broad policy instrument that can include multiple channels to achieve the policy goal. Media channels such as local television and radio stations, social media, and information posters are typical avenues for dissemination. Information campaigns

can be so cost-effective that they easily outmatch other policy tools. For instance, Weiss et al. (1994) found a fire prevention campaign in the US to be much cheaper for reducing incidences of forest fires than engineering, surveillance, and containment techniques. Another reason policy makers use public information campaigns is that they are politically attractive; they offer a lot of control over the message, which means the government can portray itself positively and imply that citizens themselves bear more responsibility to take action (ibid.).

Some potential drawbacks of public information campaigns include: limiting open competition of ideas on a given policy issue, unequal access to information based on level of education, and overpowering diverse perspectives from different societal groups (Weiss et al., 1994).

The various channels used in a public information campaign are also usable as individual tools on their own. For example, governments might use press releases, ads on television or radio, leaflets, or posters, either in isolation or in combination with other tools as part of a campaign. A study conducted by Walker et al. (2020) suggested that policy makers should use eye-tracking technologies to test out materials during the policy design process, to ensure that communication media such as posters adequately capture the attention of their audience.

Broader Public Engagement Approaches

Policy communication may also be face-to-face rather than through written, audiovisual, or digital mediums. Such engagement approaches include one-way

mechanisms like formal public hearings, but interactive processes like workshops for shared decision making tend to be more effective (Conway, 2001). Either way, these methods require considerable resources in terms of planning, travel, and time. Hence, they are often grouped with other policy communication tools to comprise broader public engagement strategies, which are even more extensive than information campaigns.

In an example from Bangladesh, fisheries management decisions are communicated through meetings, workshops, dialogues, exchange visits, training on consensus building, distribution of leaflets and posters, and field rallies to help resolve conflicts (Murshed-e-Jahan et al., 2014).

A Sustainable Fisheries Management Project launched in Ghana in 2014 outlined several ways in which information on policy objectives and reforms could be shared with anglers and members of fishing communities (Coastal Resources Centre, 2015). The corresponding communication strategy report listed the following methods:

- national dialogues
- regional mini-dialogues
- community communication forums
- radio programs/announcements/jingles
- billboards
- branded t-shirts/branded calendars/stickers/banners
- project launch events
- press conferences/press releases
- special event day celebrations
- newsletters
- documentary screenings
- websites (including success stories)
- national toll-free lines
- social media

These public engagement approaches help to reveal the breadth of tools that can be employed for policy communication. All such methods may be generally useful and provide various means of communication, but their appropriateness and effectiveness will differ depending on what the user hopes to communicate.

4. POLICY COMMUNICATION TOOLBOX

Building on the review of policy communication tools in the previous section, Table 1 comprises a policy communication toolbox; it summarizes the advantages and disadvantages of individual policy communication tools, synthesized from the above section and related sources (see the “Key Web Resources” section at the end of this report).

Table 1: Summary of Advantages and Disadvantages of Policy Communication Tools

| Communication Tool | Advantages | Disadvantages |
|---------------------------|--|--|
| Website | <ul style="list-style-type: none"> reaches a wide audience information is easily accessible information can be updated at any time | <ul style="list-style-type: none"> unexpected crashes difficulty reaching target audience potential exposure to spam user cost (time and internet access) |
| Social Media | <ul style="list-style-type: none"> reaches a wide audience content can be posted for free with the option to run paid advertisement option to direct traffic to a website useful policy feedback may be submitted through comments | <ul style="list-style-type: none"> time-consuming security risks exposure to fraud and scam may damage government reputation |
| Press Release | <ul style="list-style-type: none"> helps refine messaging to facilitate understanding by audience provides information for journalists to write stories about | <ul style="list-style-type: none"> may not reach targeted audience usually not written in plain language and may be relatively inaccessible to general public may not be cost-effective |
| Television | <ul style="list-style-type: none"> reaches a wide audience captures attention fosters emotion and empathy | <ul style="list-style-type: none"> requires additional time and effort expensive advertisement must be frequent for audience to remember |
| Radio | <ul style="list-style-type: none"> general audience reach timely message delivery more affordable than television | <ul style="list-style-type: none"> audience reach lower than for some other tools lack of visual appeal like television, requires frequent advertising |
| Poster | <ul style="list-style-type: none"> possibility of reaching a large audience can be used several times easily produced ideal for simple messages | <ul style="list-style-type: none"> less flexibility (difficult to make corrections) must attract the attention of targeted audience logistical challenge of placing them can be easily misplaced |

| | | |
|-------------------------------|---|--|
| Community Communication Forum | <ul style="list-style-type: none"> • helps build new relationships • allows for feedback • creates awareness • improves communication and performance | <ul style="list-style-type: none"> • difficult to facilitate (e.g., participants may want to discuss more than there is time for) • online forums may lack quality and have additional facilitation challenges |
| Workshops | <ul style="list-style-type: none"> • promotes new ideas • encourages active discussion and learning | <ul style="list-style-type: none"> • logistical challenge • open discussion and communication come with risk and uncertainty |

5. FISHING REGULATION COMMUNICATION IN CANADIAN JURISDICTIONS

Although many other jurisdictions are mentioned in the overview of communication tools above, provincial and territorial jurisdictions in Canada may provide the most relevant context for policy communication around fishing

regulations in NL. Table 2 synthesizes the communication approaches to fishing regulations in different jurisdictions across Canada. Note that the table only indicates each jurisdiction's broad approach to communication, not necessarily any specific tools for highlighting regulation changes or other one-time communication needs.

Table 2: Comparison of Policy Communication Tools for Fishing Regulations in Canada

| Province | Communication Tool | URL |
|------------------|--|---|
| Alberta | Regulations are published in a guide available on the listed website. The public can seek clarification on fishing regulations by visiting the nearest Fish and Wildlife office. Other resources include videos on general fishing regulations and how to use the sportfishing regulations guide (complete with a simulation). | https://albertaregulations.ca/fishingregs/ https://www.youtube.com/watch?v=-sZQUTwJkos https://mywildalberta.ca/fishing/regulations/default.aspx |
| British Columbia | A regulations synopsis is published on the listed website. Printed versions of the synopsis can be obtained from Service BC, FrontCounter BC, regional offices, and fishing license vendors. | https://www2.gov.bc.ca/gov/content/sports-culture/recreation/fishing-hunting/fishing/fishing-regulations |

| | | |
|---------------------------|--|---|
| Manitoba | Regulations are published in an angling guide available on the listed website. Social media platforms such as YouTube, Facebook, and Instagram are also used to share policy updates or other information. | https://www.gov.mb.ca/sd/pubs/fish_wildlife/angling_guide.pdf |
| New Brunswick | Regulations are published in a fish book available on the listed website. | https://www2.gnb.ca/content/gnb/en/departments/erd/fish-and-wildlife/content/go-fishing.html |
| Newfoundland and Labrador | Regulations are published in an anglers' guide available on the listed website. Fisheries and Oceans Canada and provincial government offices also provide guidance if solicited. | http://www.nfl.dfo-mpo.gc.ca/NL/AG/anglersguide |
| Northwest Territories | Regulations are published in a fishing guide available on the listed website. | https://www.enr.gov.nt.ca/sites/enr/files/resources/denr_7017_sport_fishing_2019_eng_web.pdf |
| Nova Scotia | Regulations are published in an angler's handbook available on the listed website | https://beta.novascotia.ca/documents/anglers-handbook |
| Nunavut | Regulations are published in a guide available on the listed website. | https://www.gov.nu.ca/environment/programs-services/fishing-regulations-guide |
| Ontario | An annual guide for anglers is published on the listed website. Social media platforms such as Facebook, Instagram, and Twitter are used to share information and connect with the public. | https://www.ontario.ca/document/ontario-fishing-regulations-summary |
| Prince Edward Island | Regulations are published as an angling summary on the listed website. The website also provides information on common questions asked by the public. | https://www.princeedwardisland.ca/en/information/environment-energy-and-climate-action/angling-resources-and-information-centre |
| Quebec | Regulations are published on the listed website. The website also provides additional information on fishing policy updates. | https://www.quebec.ca/en/tourism-and-recreation/sporting-and-outdoor-activities/sport-fishing |

| | | |
|--------------|--|---|
| Saskatchewan | Regulations are published in an anglers guide available on the listed website. Social media platforms such as Facebook, Twitter, and LinkedIn are used to share information on fishing policy updates. | https://www.saskatchewan.ca/residents/parks-culture-heritage-and-sport/hunting-trapping-and-angling/angling |
| Yukon | Regulations are published on the listed website. The website also includes a link to all regulation changes. | https://yukon.ca/en/fishing-regulations#important-fishing-regulations-changes-for-2020-2021 |

6. THE “HUMAN FACTOR” IN POLICY COMMUNICATION

A crucial factor for determining an organization’s success in any endeavour is the roles that humans play (e.g., employees, managers, directors, and stakeholders). These roles are shaped by human qualities such as personality, attitude, actions, creativity, and level of effort. For example, an organization where employees are hardworking, honest, and principled is likely to be more successful in achieving its goals, compared to an organization where employees lack such values, all else being equal (see Ortner, 2000).

Regarding policy communication, this “human factor” reminds us that after strategies and plans are developed, they are implemented by individual people, with all their flaws and complexities. Ortner (2000, p. 133) explains that “a company can have the best documented quality plan and superb instrumental outfit, but if the employees, and not only those responsible for [quality], are demotivated and careless, the production will not meet high quality standards”. According to Bevilacqua and Ciarapica

(2018), organizations should integrate human factor risk management into their operations in order to best meet their goals. Thus, strategic project planning (i.e., anticipating potential challenges and shortcomings) may be a key to success for policy communication initiatives. When choosing between communication tools, an additional consideration is the susceptibility of each tool to human error.

7. CONCLUSION

Effective communication is critical to policymaking, regardless of which policy actor engages in it. Lack of proper communication between policy makers and stakeholders could lead to conflicts and non-compliance with regulations. De Vries (2020) suggests that messages should be simple, balanced, and oriented toward action. Thus, the choice of communication tool is vital.

This report has described a range of policy communication tools and demonstrated their use for different policy issues in various jurisdictions, but with a focus on fishing regulations in Canadian provinces. In the spirit of serving as an “honest broker” (Pielke Jr., 2007), our primary goal

is to present a range of options rather than advocate for particular approaches. However, based on the preceding discussion, we identify two approaches as possible starting points for IBEC to communicate policy changes in the area:

- Use a public information campaign, drawing on: website updates, local television and radio advertising, and social media (Facebook, Twitter, Instagram). Good practice would be to announce changes a few months before they take effect and ramp up communication efforts a few weeks before the start of fishing season. We recommend this option because it will reach a larger audience and is likely to be cost-effective given that reach. Of course, “cost-effective” does not mean the cost is low. An information campaign requires a certain amount of up-front funds, which is a definite drawback.
- Create a compliance simulation video providing a pictorial view of what the new regulations require anglers to do. Upload the video to any relevant websites or social media platforms. The province of Alberta has adopted a similar communication strategy. Through this project’s document review, we did not discover any instances of a demonstration project being used to communicate fishing regulations, which was a particular interest of IBEC. A compliance simulation video appears to be the closest comparable example. A video for the Special Trout Management Area could include: a narrator standing in a location that is now

(but was not previously) part of the Area; side-by-side maps highlighting the added regions; demonstrating how to consult the relevant pages of a print copy of the NL Anglers’ Guide; side-by-side comparison shots or diagrams of the old daily limit (for outside the Area) and the new daily limit (for inside the Area); a similar comparison for possession limits; and any other relevant information.

REFERENCES

- Bank, C. & Peckar, E. (2019). Fisheries communication plan. Vineyard Wind LLC. Retrieved from <https://static1.squarespace.com/static/5a2eae32be42d64ed467f9d1/t/5d67ff3ec44e15000183fb46/1567096638987/Rev+7+Fishery+Communication+Plan.pdf>
- Bevilacqua, M., & Ciarapica, F. E. (2018). Human factor risk management in the process industry: A case study. *Reliability Engineering & System Safety*, 169, 149-159. <https://doi.org/10.1016/j.res.2017.08.013>
- Coastal Resources Centre. (2015). Sustainable Fisheries Management Project (SFMP). Retrieved from https://www.crc.uri.edu/projects_page/sfmp/
- Conway, F. D. L. (2001). Changes and fishery management: Impacts, communication, and fishing communities. *IIFET 2000 Proceedings*. Retrieved from <https://www.semanticscholar.org/paper/Changes-%26-Fishery-Management%3A-Impacts%2C-and-Fishing-Conway/91adf80022df759660054ffa111ed95287dde25>
- de Vries, G. (2020). Public communication as a tool to implement environmental policies. *Social Issues and Policy Review*, 14(1), 244-272. <https://doi.org/10.1111/sipr.12061>
- Escher, D. & Case, D. J. (2018). Improving communication of sport fishing regulations in Alaska. Retrieved from https://www.adfg.alaska.gov/static/fishing/PDFs/sport/Survey_Report-2018-9-19.pdf
- Gong, P., Wang, L., Liu, X., & Wei, Y. (2022). The value of social media tool for monitoring and evaluating environment policy communication: a case study of the 'Zero-waste City' initiative in China. *Energy, Ecology and Environment*, 7(6), 614-629. <https://doi.org/10.1007/s40974-022-00251-8>
- Government of British Columbia. (2021). Freshwater fishing regulations in B.C. Retrieved from <https://www2.gov.bc.ca/gov/content/sports-culture/recreation/fishing-hunting/fishing/fishing-regulations>
- Howlett, M. (2009). Government communication as a policy tool: A framework for analysis. *The Canadian Political Science Review*, 3(2), 23-37.
- Howlett, M., Ramesh, M., & Perl, A. (2009). *Studying public policy: Policy cycles and policy subsystems*. 3rd edition. Oxford University Press: Don Mills, ON.
- Murshed-e-Jahan, K., Belton, B., & Viswanathan, K. K. (2014). Communication strategies for managing coastal fisheries conflicts in Bangladesh. *Ocean and Coastal Management*, 92, 65-73. <https://doi.org/10.1016/j.ocecoaman.2014.01.003>

Ortner, H. M. (2000). The human factor in quality management. *Accreditation and Quality Assurance*, 5(4), 130-141. <https://doi.org/10.1007/s007690050432>

Pielke Jr., R. (2007). *The honest broker: Making sense of science in policy and politics*. Cambridge University Press: New York, NY.

Walker, R. M., Yeung, D. Y. L., Lee, M. J., & Lee, I. P. (2020). Assessing information-based policy tools: An eye-tracking laboratory experiment on public information posters. *Journal of Comparative Policy Analysis: Research and Practice*, 22(6), 558-578. <https://doi.org/10.1080/13876988.2020.1753035>

Weiss, J. A., Tschirhart, M., & Weiss, J. A. (2016). Public information campaigns as policy instruments. *Journal of Policy Analysis and Management*, 13(1), 82-119. <https://www.jstor.org/stable/3325092>

KEY WEB RESOURCES

“Advantages and Disadvantages of Communication Channels” (Curcha)
[link no long available at time of this publication]

“Advantages and Disadvantages of Forums” (Entrepreneurship Era)
<https://entrepreneurshipera.com/advantages-and-disadvantages-of-forums/>

“Advantages and Disadvantages of Posters” (Online Guidelines for Academic Research and Writing)
http://www.geo.uzh.ch/microsite/olwa/olwa/en/html/unit5_kap51.html#:~:text=O nce%20a%20poster%20is%20printed,compete%20with%20many%20others %20posters.

“Advantages and Disadvantages of Radio Advertising” (Bizfluent)
<https://bizfluent.com/list-6140483-advantages-disadvantages-radio-advertising.html>

“Advantages and Disadvantages of Social Media” (WebFX)
<https://www.webfx.com/internet-marketing/social-media-marketing-advantages-and-disadvantages.html>

“Advantages and Disadvantages of Social Media for Society” (TechMaish)
<https://www.techmaish.com/advantages-and-disadvantages-of-social-media-for-society/>

“Advantages and Disadvantages of Websites for Business” (The Company Warehouse)
<https://www.thecompanywarehouse.co.uk/blog/advantages-and-disadvantages-of-websites-for-business>

“Advantages and Disadvantages of Workshops and Meetings” (FoodRisc)
[link no longer available at time of this publication]

“Advantages and Limitations of Television as an Advertising Medium” (Chron)
<https://smallbusiness.chron.com/advantages-limitations-television-advertising-medium-26148.html>

“Advantages of Radio Advertising and What to Look Out For” (tmwi)
[link no long available at time of this publication]

“Fisheries Regulation Changes 2019-20 Engagement” (Government of Alberta)
<https://www.alberta.ca/fisheries-regulation-changes-2019-20-engagement.aspx>

“Freshwater Fishing Regulations in BC” (Government of British Columbia)
<https://www2.gov.bc.ca/gov/content/sports-culture/recreation/fishing-hunting/fishing/fishing-regulations>

“Letter: Good Decision, Bad Communication on Fishing Regulation Changes” (Brad Howard via Nelson Star)
<https://www.nelsonstar.com/opinion/letter-good-decision-bad-communication-on-fishing-regulation-changes/>

“National Saltwater Recreational Fisheries Implementation Plan” (US Dept. of Commerce)
<https://www.fisheries.noaa.gov/national/recreational-fishing/national-saltwater-recreational-fisheries-implementation-plan#communicate-and-engage-with-the-recreational-fishing-public>

“Pros and Cons of Press Releases” (Versatile Scribe)
[link no longer available at time of this publication]

“The Pros and Cons of Poster Advertising” (Jane Comben via LinkedIn)
<https://www.linkedin.com/pulse/pros-cons-poster-advertising-jane-comben>