

Outcome Document

STRIPE Water Governance and Data Visualization and Storytelling Workshop



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On 31 May – 4 June, 2016 the World Resources Institute in its role as secretariat of the Access Initiative, hosted a two part workshop on Water Governance and Data Visualization and Storytelling as part of our Strengthening the Right to Information for People and the Environment (STRIPE) project. Currently being conducted in Indonesia and Mongolia in cooperation with in-country partners, the STRIPE project focuses on improving access to information and participatory spaces for communities to demand clean air and water. By showcasing the need to provide more proactive information and emphasizing the release of specific types of environmental information, barriers to access can be overcome and the obtained information can be used by local communities to take action and demand change.

However, over the past three years our work has documented that community members have significant challenges engaging government officials over their concerns. Clearly expanded and more effective participation forums are needed at the local level to foster dialogue between community residents, company representations, and local government officials. Further civil society groups need to increase their data visualization skills and support local communities to better utilize the information and data obtained. Together the goal is to create meaningful materials that can enhance participation in water governance forums. Ultimately, strengthening these essential elements of advocacy will foster stronger accountability from targeted corporate and government actors.

To address these important needs WRI organized a hands-on, skills-building [workshop](#) for our STRIPE partners from Indonesia and Mongolia. Representatives from the WRI water program, US EPA, the Environmental Law Institute, Tactical Tech, Public Lab, Anacostia Riverkeepers, and the Darby Creek Valley Superfund Citizen Advisory Group were invited to lead key activities. A complete list of workshop participants is provided at the end of the report.

Together we hoped to achieve the following objectives:

- Develop a common understanding of water governance principles and drivers of effective water governance forums
- Explore the adoption and implementation of innovative practices that enhance participation of community member and civil society representatives in forums that address the monitoring, compliance, enforcement, and river watershed restoration barriers
- Understand the priorities, challenges, and experiences of STRIPE partners in facilitating participation in water governance forums in Indonesia and Mongolia at the national and local level
- Evaluate specific forums available for advocacy and create specific plans and proposed outcomes for how partners can improve participation in their STRIPE projects
- Increase skills in visualization for advocacy and storytelling by learning how to use information persuasively and prepare a narrative and to capture attention in campaigns through knowing your audience

- Help partners determine how different kinds of visual techniques can be used in their project for advocacy to reach different audiences with the aim to highlight the state of secrecy and release of corporate information regarding environmental pollution and compliance with environmental standards
- Enable partners to train others in these techniques by brainstorming and testing ideas for partners to utilize in the creation of specific materials needed for their STRIPE project and
- Help partners address the issue of scaling their project messages using different tactics.

Through presentations, demonstrations, field trips, and hands-on practice sessions, the workshop deepened the ability of partner to identify and utilize key governance and participatory opportunities and enhance their visualization skills in order to help achieve our project’s goals and objectives. Copies of presentation and skill building exercise materials are provided by hyperlink throughout the document. Highlights from the workshop are presented below.

DAY 1: Tuesday 31 May, 2016: Water Governance



The Anacostia River

1. What is Water Governance?

Elizabeth Moses, WRI [presented](#) an overview of the principles for effective water governance and stakeholder participation and how to apply these principles to the STRIPE project. Based on the [OECD Principles of Water Governance](#), the presentation highlighted the key framework elements, the necessary conditions for stakeholder engagement, and the common obstacles for participation. Important insights are provided below.

- Key framework elements include structural drivers such as climate change, urbanization and industrialization, or large projects such as dams. Enabling condition include both the institutional and legal regulatory framework and the public participation enabling laws. The cultural and political context are also important elements to consider.

- OECD Principle 9 and 10 focus on stakeholder engagement and integrity and transparency.
- In order to apply this to the STRIPE work in Indonesia and Mongolia, partners must ask themselves a series of key questions regarding their water management focus, goals and objectives, target institutions, forums for participation, and the capacity of local community members.
- How we scale our work to achieve greater impact is critical to the STRIPE project.

The following issues were raised during discussion after this presentation.

- Integrated Water Resources Management led by the Indonesian Public Work Ministry has already divided the river authority according to regions: 6 rivers are listed - (3Ci's [Ciujung, Cidanau, Cidurian) + 2Ci's [Ciliwung, Cisadane) + Citarum).
- In Indonesia, the management framework is supported by the Intra-American Development Bank (IDB) and includes support for physical development such as river embankments. There is also a coalition on water related to IDB projects, but it is not consultative and relates to technical infrastructure issues.
- One of the key water governance challenges in both countries is the question of how to deal with a diverse, spread-out rural populations, including those with hundreds of sheep and goats, and cattle. It is difficult to create effective mechanisms for their participation, figure out how to choose who should participate, as well as address both river protection and water use issues.
- Water allocation is a significant issue in Mongolia especially competing demands between cattle/community and industrial use. How to ensure the participation of the herder community is key as the government is currently engaging citizens over the mining of copper and gold but not water use.
- In Mongolia who has authority on water management - oversight and control is also important. Water basin administration includes an official council with CS groups, but this council doesn't have the authority to make decisions. Nevertheless partners believe this council through the STRIPE project could be a key focus point for participation and advocacy.

2. Overview of Current Plans and Challenges in Indonesia and Mongolia

Partners from Indonesia and Mongolia both presented their current water governance work and the key enforcement, monitoring, regulatory framework, and watershed management and river restoration problems that want to consider or address.

Taba Hamdi, Media Link [presented](#) the Indonesia framework. The STRIPE project overall emphasis is focused on the challenges of ensuring adequate monitoring of compliance and enforcement activities of the Government and strong public participation demanding administrative sanction for ongoing company based pollution violations. While there are many opportunities offered by local government regulation plans and actions a lack of information, a weak technical pollution control regulatory environment, government budget constraints, and poor government capacity are key problems that must be addressed. Overall he emphasized the following.

- For STRIPE the water management focus is pollution control into the Ciujung River. Specific goals and objectives include river remediation, correcting or stopping further development, stronger regulations, and better compliance and enforcement monitoring of industrial dischargers
- Institutional targets include local and national government agencies. Currently there is not a strong forum for focusing participation.
- Increasing the capacity of local community villagers especially around compliance and enforcement and monitoring is key. Partners have chosen to prioritize one village for a legal suit and youth and student engagement in general.

- Partners are using a cooperative approach for engaging with the government around enforcement including self-monitoring and sending formal complaints - trying to influence spaces including local parliament. They are also using a non-cooperative approach via the lawsuit. The third type of engagement is focused on the media coverage and public campaign.
- There are multiple levels to administrative sanctions – warning through action - but to date no permits have ever been revoked. Government officials do not share the outcomes from sanctions with the community so no one knows what the consequences actually are.
- There is also a lack of information about the pollution load in the Cijung River. The government does not require automatic monitoring in permits nor does the permit review mechanism include a requirement for community comments. Further the regulation governing permits do not include the listing of toxic substances. Thus the community doesn't have an incentive to monitor the river for pollution. It is also not clear where communities can complain about regulation or permit violations.
- Partners are interested in applying the approach for water quality monitoring used by ECOTON, another group working on the Brantas River water quality issues to the Cijung River. However the Cijung River is not included in the list of national priority rivers currently being developed by the Government of Indonesia. While the governor has been asked for it to be included this may limit the action possible in this forum.

Both **Bayarmaa Byambasuren, Patrons of Khuvsigul Lake** and **Dolgormaa Lodoisambuu, Environment and Health Center** outlined the work in Mongolia. Their [presentation](#) focused on the Mongolian water governance legal framework, national strategy objectives, main challenges in relation to water management, and the formal rights and enabling environment for active participation by citizens. An overview of the STRIPE project in this context is as follows.

- For the STRIPE project, the water management focus is pollution control and water quality. The local Water Basin Authority does not have the authority to make decisions. The Tuul River Basin Admin has a council but no members of CS or involvement of local community members.
- Project goals and objectives include better compliance and enforcement and stronger regulation as well as stopping further development. The team is not clear if they should focus on private companies or national and local agencies.
- STRIPE is focusing on empowering local community members to understand water governance issues and legal framework and opportunities and be more aware of how these decisions impact water.
- There are other water focused initiatives currently taking place in other key areas of Mongolia that could be leveraged for the STRIPE project. These include best practice for use of water in Southern Mongolia, a national forum around mining, and EITI forums. There is also a new Water Basin Council that has not yet started operating but people for participation have been identified.
- Lawsuits in Mongolia are difficult; one needs to have environmental protection specifically mentioned in the charter of the organization to have legal standing. Citizens have the right to file complaints but the court process is very expensive; further only a very limited number of NGOs have standing and the resources to file.

After presentations the group had a facilitated discussion on diagnosing spaces for presentation. Based on the questions presented in the water governance discussion, partners identified the key requirements for forums, current forums to be considered, and next steps for action. The results of this exercise are presented below.

MONGOLIA

Key Requirements for Forums	Current Forum: Water Basin Council	Next steps	Current Forum: Council for the MoEGD	Next Steps
Inclusive	44 members 11 CSOs	Enforce the procedural rule that requires balanced representation and engagement of community members	10 members 3 CSOs 2 academia	Make balanced representation as the decisions are made with majority votes
Clear legal basis	Law on Water		Law on Government	
Fair and transparent	n/a		No balanced decision Transparency informs agenda and decisions to CSOs	
Clear basic rules on how operate and decisions can make	Procedural rule for establishment and operation of Basin organizations	Enforcement is needed. Also more detailed/ concrete regulation for how to get more balanced representation is needed	Procedural rule applies	There is no strict enforcement rules
Mandate relates to our objectives	Submit joint decision on water management monitoring and oversight.	Revoke the authority of granting permission. Expand the power.	Policy level decision making is relevant to our work.	To have opportunity to introduce and get approval on our draft policies
Level of participation	Partnership	Decision making	Representation	Decisions need to be more collaborative; meaningful
Participants acting in good faith	yes		yes	
Outcome is not predetermined	n/a		yes , the government intention is strongly supported	
Speed - can take decision on timely basis	n/a		There has been 13 meetings in 2015	To make the schedule more predictable and routine.
Is it effective space - budget, technical skill, resources etc		Potentially it can be effective and the current choice.	Requests for introducing the issues at the Council is open.	

INDONESIA

Key Requirements for Forums	Current Forums (Forum DAS Cijung)	Next Steps	Current Forums (Liquid Waste Permit Periodic Evaluation)
Inclusive	Community included, but positioned as water users, similar as industries. Unequal.	-making change into new regulation -optimizing current opportunity	Yes (according to the norm)
Has a clear legal basis	Yes, Governor Decision (2009).	Stronger legal basis, exp Governor Regulation/Provincial Regulation.	Ministry of Environment Regulation No. 1/2010 stated explicitly, but more detailed mechanism is in its Annex 5.
Fair and transparent	No.	-making change into new regulation -using current legal framework (FOI Act, Environment Act) to access relevant document and to press open decision making process.	Not specified.
Clear basic rules on how operate and decisions can make	The basic rules are not clear as in the forum doesn't state the mechanism that could work on decision making	-making change into new regulation	Yes.
Mandate relates to our objectives			
Level of participation	Consultation, hearing only.	Connecting the obligation of the permit grantor to consider the input from community when evaluating permit based on Ministry of Environment Regulation No. 01 Year 2010 to the Forum DAS Cijung	
Participants acting in good faith	Doubted. Gov agencies treat consultation as checklist work, and in favor of industries/business.		
Outcome is not predetermined	Mostly Yes. Community is included mostly as a "stamp".		
Speed - can take decision on timely basis	The forum doesn't state explicitly the timeline basis concerning on decision making. Even the forum doesn't have the action plan on		Yes, the permit periodic evaluation held every five years. The challenge is the community and

	river restoration with all relevant institutions (vertically and horizontally)		CSO have to know the information concerning the period of the permit
Is it effective space - budget, technical skill, resources etc			

3. Participation Skill Building Session

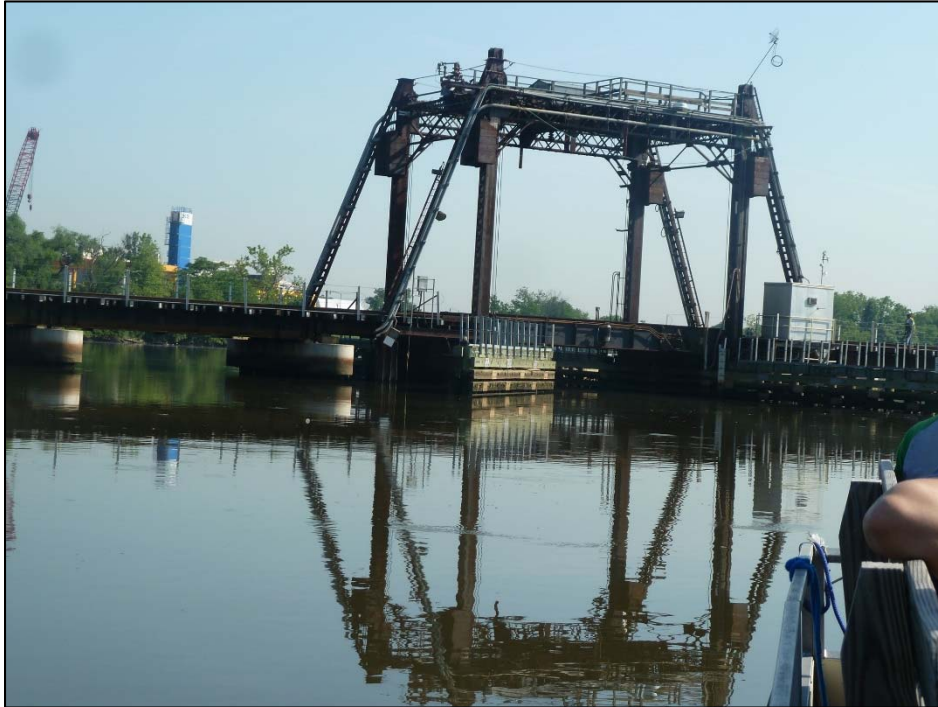
Shereen Kandil, Public Participation Specialist, U.S. EPA, Office of International and Tribal Affairs, led an exercise on participation based on the [US EPA Guide to Participation](#). The [presentation](#) included an overview on the levels of participation, how to conduct an internal and external assessment including how to make new communities comfortable, and a brief overview on how to do Participatory Mapping. Highlights from her session are below.

- The public participation guide is a helpful resource for decision-makers, NGOs and academia as it helps decision-makers design and implement a public participation process. It specifically includes activities around classroom participation, tools and techniques.
- EPA has also given technical advice to specific countries and is developing an online training course on public participation including the role of public participation and conflict resolution (Will also be available in Spanish). The emphasis is on collaboration and going to where the people are.
- Efforts in Mongolia in Khoroo #13 around community empowerment have already resulted in local community members forming their own NGO. They are now talking about their own issues and STRIPE partner feel are definitely more confident.

[Participatory Mapping](#) enables people to gather new information and supports decision-making. In one example cited it allows community members to identify ways for remediation of sources of water contamination where specific problems include gaps in information and priorities.

- Principally, participatory mapping serves as a tool to provide a visual representation of information in a particular geographical context. It is based on a stakeholder’s perception with a focus on a certain issue of interest.
- The regarded topics can vary: geographical and physical conditions (such as available resources and their use), or the differentiated use of natural resources by land users, or potential dangers and threats concerning the use are all examples of topics that have been used.
- Participatory mapping can also serve as an analyses tool and present the situation of the water and sanitation system in a local context. The map produced in such a way can serve as a basis for tracking decisions about how to change the local water and sanitation situation.
- References in the link provided include specific examples from Mongolia and Indonesia.
- A map produced in such a way can be used as a basis for decisions in regard to sustainable sanitation and water management – e.g. which problems are the most important and require most attention (see problem and preference ranking). Naturally, information compiled in such a way needs further research and complementary information in order to make a good decisions and start with implementation tools.
- Only those issues that have a geographic attribution are useful to analyze with maps. Maps are useful for obtaining a better understanding of an area being studied, and for providing information and ideas

on local perspectives, for example, resources or access to services/facilities. Maps are useful for presenting the gathered information in a nice and understandable way and to make comparisons of the starting conditions and the ongoing process. It is very reasonable to combine this assessment tool with others (water resource assessment, integral description of the settlement conditions, etc.) and to connect and complete the gathered information relevant for the assessment process.



The Anacostia River

Steps for Locality Mapping

1. Ask the individual or the group to draw the boundaries of the geographic unit being discussed. Participants or the planner can decide how they want to represent this – on paper or using local materials such as wet sand and earth with sticks, stones or seeds. Remember that whatever material is chosen, you will always need a paper-based copy to enable comparative analysis. If it adds to the discussion, three-dimensional elements can be added, transforming the map into a model that emphasizes landscape-level aspects of issues. This base map can be multiplied and used for different contexts.
2. On whatever medium is chosen, ask the participants to draw the basic outline of the local area, for example, roads, towns or rivers to get an accurate map, One way to do this, if you have the proper resources, is to project an overhead map onto a large sheet of paper and then to trace the required information.
3. Having prepared the map, which could be as large as a wall, people can then add their information either directly or by using sticky notes. Let them record what is most significant to them, and then ask for more detail if something you are interested in is missing. People can add relevant information.
4. To collect the most important information about the system of interest, use the following guiding questions to add the missing information:
 - a. Which are the problems a community is confronted with?
 - b. Where are these problems located?
 - c. Where are the hotspots of these problems? Which are the worst?

- d. Potentially: Who is responsible for these problems?
 - e. Are problems connected to each other? How do the problems influence each other?
 - f. Are there good examples?
5. Several modifications to the map may be needed before those involved are happy with the final result. Include additional written comments such as quantities of interest, if necessary.
 6. Once a "base" map has been made, subsequent meetings can use it to make comparisons and additions. If one has completed the mapping process, the "base" map can be used to present the current status. As stated above, the map is very valuable as an illustration of the starting condition, to make comparisons during the ongoing process.

4. Participation in Action: Citizen Advisory Group presentation

Derron L. LaBrake from the Darby Creek Valley Association gave the workshop participants an overview of this superfund [site](#) in Pennsylvania. His [presentation](#) focused on how local community members have participated on the citizen advisory board governing the restoration and mitigation options. This real world example of citizen participation highlighted many of the environmental justice issues local communities and civil society groups are facing in Indonesia and Mongolia. Important insights are as follows:

- The Eastwick Clearview Landfill site is a former dump that accepted medical waste, industrial waste, and garbage. It was never lined and waste leachate has been leaking into the surround environment. Waste disposal practices contaminated soil, groundwater and fish tissue with hazardous chemicals.
- The neighborhoods around the landfill are low income with little political leverage. They have had to spend years fighting for attention.
- The participation of local community members and the inclusion of technical experts has been essential to the cleanup process. Their involvement ensured that the local green space and park close to the site would not be taken over by the mitigation plan but stay as a resource for local communities. More advanced and comprehensive cleanup of the soil and leachate was also agreed to because of community involvement. This process has taken years and is still far from complete. But persistence is working.
- Clear rules govern the involvement of citizens on the advisory committee and who needs to be presented is clearly outlined. The committee is provided with essential information in order to participate. One of the key roles played by Derron as an environmental consultant and technical expert is to help local community members understand the scientific and engineering data and information being discussed.

DAY 2: Wednesday 1 June, 2016: Water Governance continued.

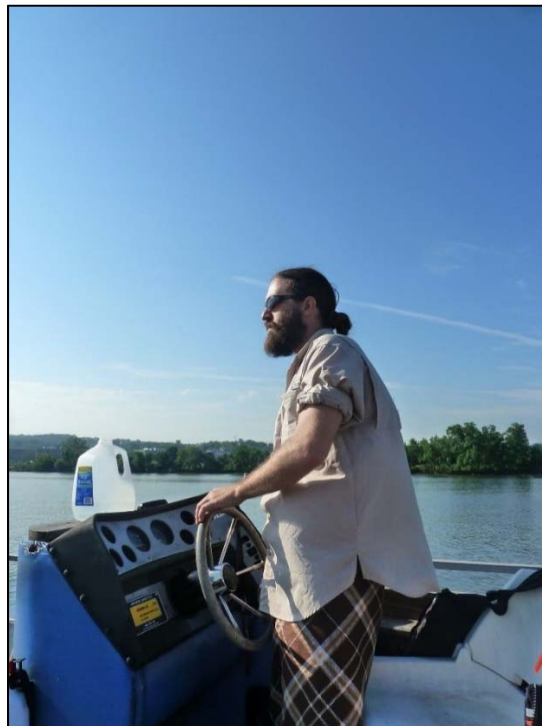
1. Anacostia River Field Trip

The second day began with a field trip to the Anacostia River and a tour and discussion with the [Anacostia River Keeper](#), Trey Sherard. The Anacostia runs through the greater Washington metropolitan area. Heavy pollution and weak development oversight and attention led to it becoming what many have called "DC's forgotten river." One of the biggest problems facing the River is raw sewage because of the antiquated DC sewer systems. The Washington Navy Yard is also believed to be a large historical source of PCB contaminants in the river and sediment. Although mitigation and cleanup activities are ongoing, it currently hosts at least 5 toxic waste sites. Things learnt from engaging with the Riverkeeper are outlined below.



The Anacostia Watershed

- Engagement of different user groups such as the fishing community is essential to the river. Riverkeepers needed to think carefully and strategically about how to engage with this group in an open and meaningful manner. Statements of scary facts to try and persuade them not to eat toxic contaminated fish from the river did not work. Creating activities such as parent/child fishing days provided a platform for dialogue. Goal is to have them see the River as a resource for use by the local community.



Trey the Riverkeeper

- Riverkeepers use different accountability strategies to monitor compliance and enforcement and water quality. Strategies include commenting on permits, participation in the CAGs associated with different waste sites, citizen suits under the Clean Water Act, as well as community engagement.
- The fact that both the specific pollutant testing information from each discharger and their compliance with their discharge permit are required be made public under US law gives the Riverkeepers essential information they can use to both engage with the discharger and the government. Often only a letter identifying violations and the consideration of litigation is enough to change behavior.
- The importance of testing sediment and the reduction of sediment contamination was highlighted. The testing supports stabilization of the river and is a key factor impacting the health of the fish and restoration of the watershed. Whether to dredge or cap the toxic sediment is currently being debated.
- Being persistent overtime is essential. It has taken many years to see improvements on the Anacostia, but cleanup and mitigation activities are now happening. The Riverkeeper role has been essential to this long term process.

2. Balloon and Kite Mapping

After lunch the workshop participants traveled to Fort Hunt Park in Virginia to investigate low tech ways for creating maps with local communities. Lead by Jeffrey Warren, [Public Lab](#), the team used small cameras and kites to take aerial photos of the park. Insights from this exercise are as follows:

- Kite mapping is a fun way to engage local community members and bring ownership to the process, especially when conducted as a group activity.
- Bringing a group together provides a forum for education and engagement on key issues beyond the making of the map.
- This exercise serves as an important example of creative ways of engaging with local community members beyond traditional workshops and newsletters. It is important to think through how to apply these “outside the box” kind of ideas in each country as part of STRIPE project.
- You need patience, persistence and wind for kite mapping to work!



Learning to create maps with Jeff



Kite mapping at Fort Hunt Park

3. Compliance and Enforcement

Carl Bruch, ELI and Carole Jones visiting scholar at ELI outlined how civil society and communities can participate in and promote enforcement and compliance. Carl's [presentation](#) provided important information on the basic theory of enforcement. He highlighted the range of behavior one can expect from regulatory facilities and the impact different methods can have on changing the degree of compliance. Carole provided an overview of the range of policy tools that can be used for enforcement and the features of public liability for public natural resources while highlighting one example around [Tropical Country Natural Resource Liability Study](#). Key takeaways are presented below.

- People focus on enforcement but really what they want is to use enforcement to support compliance.
- Should consider having different strategies with different actors to promote compliance, those who don't comply and will not unless enforcement action taken, those who will comply with support, incentives etc., and those who will always comply.
- To create a culture of compliance, it is important for stakeholders to understand the regulated community and tailor approaches to help them comply. Should include improving tools for compliance assistance and broadening understanding of role beyond strict law enforcement
- There are specific sources of legally binding norms that can be enforced such as statutes and regulations, but others such as policies or guidance may not be so clear.
- Individual citizens have the right to observe their surroundings and discover violations but should think carefully about for what, when, and the result that can be expected. This include the process of assessing damages and the different types of damages that are possible and forms of liability in different countries for natural resource damage.
- Environmental liability laws exist over a wide range of tropical contexts. Most include a broader scope of harms covered and broader standing provisions than in the US and EU. Measure of damages is often more narrow, less well-defined than in US/EU. There have been a number of litigated cases around deforestation and related environmental degradation, pollution and illegal resource takings.

- Liability for environmental damage is essential to fully implement the polluter pays principle.
- A good resource for explanations about ecosystem services: <http://www.teebweb.org/resources/ecosystem-services/>. Please check out the “case studies” section as there are a number from Indonesia and Mongolia, including on water issues.

DAY 3: Thursday 2 June, 2016: Data Visualization and Storytelling

The second part of our workshop focused on using the information collected during the STRIPE project to create meaningful materials that can enhance participation in water governance forums. The entire three days were facilitated by Marek Tuszynski and Gabi Sobliye from Tactical Tech. Each day the participants worked on different sections that make up a design brief.

1. Exposing the Invisible: Using Images from Balloon and Kite Mapping

Jeffrey Warren, Public Lab led the group through the exercise of creating maps with the images we created using kite mapping. The strengths and weaknesses of other methods of making maps was also discussed. An overview is provided below.



Aerial photo taken during exercise

Tips for creating maps with kite mapping images

1. Do it as a group activity to find good picture
2. Choose images that you want - every 5 seconds is suggested
3. Make a folder and drag the good ones there - try and get 10 images - for a larger area may need more
4. One image is sometimes all you need - got a legal right to monitor site
5. Strategically position yourself upwind from site
6. Can even fly higher - can go up to 900 m with a balloon 1.4 km possible (400m ideal) not hard to get that high and cover large area
7. Have to decide whether photographs alone are enough
8. Can use [Mapknitter](#) - your user names is not completely private - if you do not want it to be shared can do anonymously

Pros and cons of different methods for making maps

Mapping Method	Pros	Cons
balloon/kite mapping	low tech good for engaging lots of people	need wind and more people may be dangerous to people flying the kite/balloon depending on the area trying to photograph
Google maps	Free and universally recognized	can be old difficult to document differences over time
mountain/tall buildings	easy to document differences over time	only single perspective angle/photo perspective can be an issue
Drones	Guidable easy to do as one person can be used over large area	laws may limit use
Airplane – flying	easy for one person	only single perspective can't capture differences over time easily
Buy satellite images	Accurate and comprehensive	expensive
Government data	good for single person to utilize	not readily available everywhere difficult to capture differences over time

2. Influence Mapping

Marek and Gabi led the group through a fun but challenging influence mapping exercise. Mapping audiences includes identifying those you are used to communicating with and those you want to communicate with. In this interactive session the Tactical Tech team introduced important questions to consider such as ‘Who cares about the findings?’ and ‘Who do you want to care about them?’ The group experimented with different kinds of messages and how they resonate with different groups and persuading those who are neutral, unconvinced or indifferent.

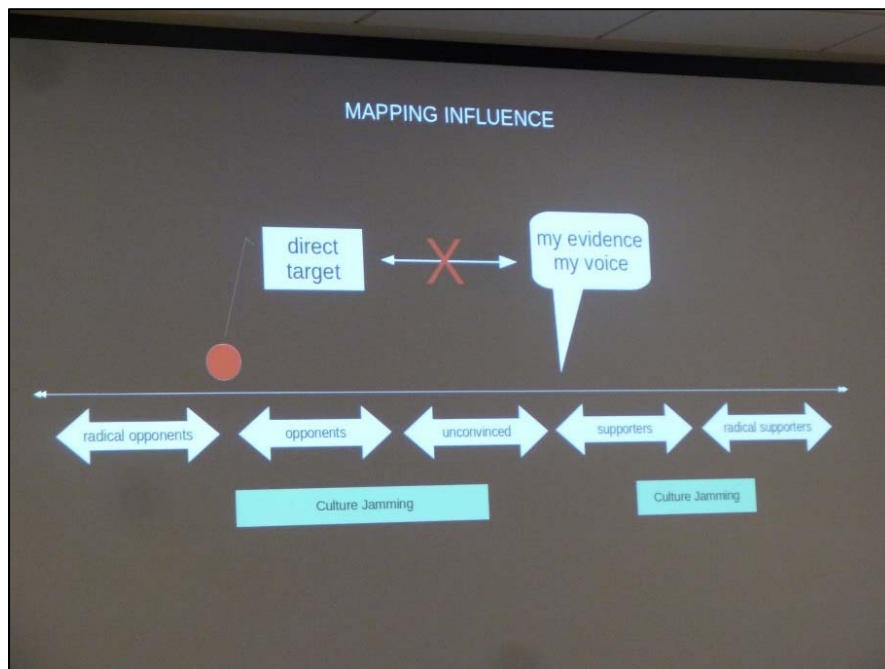
Partner teams were tasked with identifying the problem → audience → visual context → visual narrative (output). Partners had to draw everything in a way that required no verbal explanation. But they had the opportunity to modify their drawing as they answered a series of questions revealed in stages. The detailed steps were as follows. A template for this exercise can be accessed [here](#).

- 1) Problem: Choose a problem that your group wants to work on (brainstorm) and agree and write it down. Is problem really a problem or the solution or a symptom of the problem? Think through why anyone should be bothered with it. What is the most difficult aspect of this problem when explaining it?
- 2) Audience: Who will be looking at the visual you are going to produce and what do you want them to do? How does your audience consume visual information? What do you expect them to do after they have looked at the visual? Are you sure these are the people who would look at it or who would be able or wanting to act? Why would they listen to you?
- 3) Visual Context: What are the most known visuals/visual stories already used that you know of? Which are good, which are annoying, which are ineffective? What is working and what is not in all of them?
- 4) Visual Narrative: Think of – image/series/visual narrative that you think would help you influence your audience. Why would they work? How could you test if these are good ideas? Why do you think you chose the best medium?



Oyuna presents the Mongolian's team's visual narrative

During this exercise partners reflected on the challenges around choosing which audience to target and how to develop a single image for multiple audience groups. They also recognized the importance of evaluating the existing images used. The continuum of actors and impact/need to influence was highlighted including radical opponents → opponents → unconvinced → supporters → radical supporters. Also introduced was the concept of culture jamming - using the language of opponents against them.



Continuum of actor and influence slide from presentation

3. Using Other Tools for Visualization

Workshop participants had the opportunity to move through different stations and investigate how others use data and information to support effective advocacy and engagement. Specific stations were hosted by

- Eliza Swedenborg, on WRI's [Aqueduct](#) global water risk mapping tool.
- Yiyuan Jasmine Qin, on WRI's new [GFW Water](#) platform
- Bryan "Ibrahim" Goodwin, US EPA - Office of Water, who leads on citizen science activities and has been conducting a series of WQS workshops for the EPA
- Margarete Heber, US EPA, presented an overview of the EPA tool "[How's My Waterway?](#)" with support from two interns. More EPA Tools can be found at <https://www.epa.gov/waterdata/waters-tools>



Partners at data stations



Bryan showcasing the water quality testing tools

DAY 4: Friday 3 June, 2016

1. Convincing Images

During this interactive session the role of using images in many different capacities (such as using evidence, values, and emotion) was introduced. Participants were presented with multiple images and evaluated their effectiveness and message based on three key questions.

- Who do you think is the intended audience?
- What do you think is the problem they want to solve?
- What do they want the audience to do?

The discussion was divided into three categories – Get the point or exposing the problem, Get the Picture or enabling understanding, and Get the Details - exploring the information. Important highlights are presented below.

Get the point images

- Require a short time to look at them; Goal is to grab attention for single point and trigger new ways to think about the idea. Can add writing to help do something more substantial (call to action).
- One kind of “get the point” image are Proxy stories. One example highlighted was the picture of a deceased bird and the large amount of plastic found in its stomach. It is difficult to visualize small pieces of plastic and impact on wildlife in oceans so the image of a bird with trash in the stomach is used as an example.
- Other images trigger the public to think differently about a problem - shark vs toaster video example. Image can also be used as metaphor, subversion (shark story where get something different than expect), humor, shock, contrast



Workshop Participants

Get the Picture

- Used when audience already understands the problem but creator wants them to learn something or connect the dots
- Message focuses on what is wrong → how we got there → how to fix it; uses context to provide detail and supplement. Another option is to create an image that is timeline based - what's happening over time and connected to outside events - tell the story with visual imagery
- Can also tell the audience how things have changed by providing context/putting things into perspective/making things relative problem/solution or cause or effect; consequences/projecting the future is another option



Our Kite Mapping Getting the Picture

Get the Details

- These images work best for problems you can easily repeat. They are straight forward and include easy to remember elements of something you didn't know; provide a dive deeper into context
- Consider the image as an entry point. It does not try and tell the entire story but acts as an entry to more information; they should engage people and give them cross cut options for diving into the data/information.
- Often the image reveals the scale of problem vs being visually appealing.
- Working with large data sets examples were provided
 - Improving data infrastructure for better delivery of services or response - taking snap shots from google earth of villages and using materials used to build roofs to determine which poor communities that needed more support was used as a proxy indicator
 - Predicting risk to help target services - Chicago and fires example - used indicators for low income and less protection from fire and then distributed smoke detectors in high risk areas
 - Planning for optimal or appropriate distribution - bike share travel demand model in Boston
 - Using admin/public data to assess effectiveness of programs/projects - \$1 mill block example - costs associated with prison system in US connected to where they came from - correlation between specific neighborhood and costs

2. Persuasion and engagement

The group investigated different strategies for persuasion and engagement such as interruption, education, and coercion. Together we discussed how to curate the flow of a story and navigate weak elements and grab attention in the right place. Facilitators asked partners to specifically think about any opportunities/classic images/events they could take advantage of to engage the public typically not engaged and in new forms.

Creative forms of persuasion or using different angles to influence people often involve

- Targeting someone who would influence decision makers/key actor vs targeting key actor directly
- Fostering community participation in public spaces. This can include off line and public setting (such as the sidewalk) or in groups. It addresses where information gathered is given back to community in forms and locations that are easy for them to access. Creating visualizations that public can see in their space such as in data murals or street/neighborhood quality spray paint polling activities.
- Using corporate language/culture against the corporate target. Key examples of this strategy include Greenpeace’s work around [Chevron](#) and the [Yes Men](#). These examples highlight how the image/campaign gave them an audience that they would have otherwise never had

3. Visualization Tools

During this hands-on session the group used online tools to create data visualizations from maps to static graphs. The pros and cons of different kinds of charts were highlighted. The key is to find the right chart for data and for the audience. A table of options is presented below

<u>Chart Type</u>	<u>Tips</u>
Column chart	Everyone knows how to read them but also boring. Pay careful to bad colors
Pie charts	People understand them and create if talking in 100%/whole thing. Be careful for too many values and colors
Treemaps	like a pie chart - visualize a whole thing - typically used for budget data; easy to read and understand
Bubble charts	hard to tell differences between bubbles; optical illusion can be an issue
Line chart	can be confusing
Pictorial chart	Used in infographics
Network graph	can be confusing - good one shows connections/influences and whose at the top
Map	careful not to use with non-geographical data
Word Clouds	Shows frequency of words. Good as research tool not just image generating. Examples include Wordle , Word Counter , and Word It Out

Key takeaways from this session are as follows

- Chose the right approach to fit the data. Create the story first technique second. Don’t try to visualize everything - choose the story/choose the data.
- When choosing the right tool, language can be a barrier. A large percentage of chart options are for English speakers. Cost and open source are important factors to be considered.
- For resources - See <https://visualisingadvocacy.org/resources/visualisationtools>

- Don't forget the importance of cleaning data. Visualization tools won't work if data is not clean, inaccurate, or incomplete. European Spreadsheet Risks Interest Group (ESRIG) tracks "horror stories" of where data errors in spreadsheets have led to real consequences. Finding and removing unwanted bits of data in spreadsheets (blank spaces, column headers) is critical. So is dealing with inconsistencies in the data – abbreviations. A tutorial on cleaning data and more resources can be found at <http://schoolofdata.org/courses/>.

Other visualization tool resources

Resource for	Sites
Data cleaning	Data wrangler
Making Charts	google charts, excel, or Data wrapper
infographics	Infogram or Raw
Color options	http://colorbrewer2.org/ is a good resource for color codes http://www.colourco.de/ http://www.tigercolor.com/color-lab/color-theory/color-harmonies.htm

4. Online storytelling tools and new forms of engagement

Partners continued with a skill share on tactics, techniques and tools from generating gifs, website storytelling experiences to new forms of engagement such as micro-tasking. The facilitators highlighted that if your primary focus is to be authentic the quality of what you produce is less important than the message; however if goal is to create more professional output it is important to recognize that using data/information in communication is a professional skill that should be done by professionals - treat like any another component of project where you need experts.

Resources and tips are provided below.

Storytelling Type	Tips and Resources
GIF	Short film that is easy to use and can be engaging; sort of like a Slide show/montage of images/meme http://gifmaker.me/ Can spread very quickly and shared a lot
Meme	historical archive/database of memes can be found at http://knowyourmeme.com/ https://makeameme.org/ Spread quickly, low effort; You can make either a meme with an existing image or online through tools
Parallax scrolling	Anything that involves scrolling with background moving - overlapping movements; Mix of text, images, and audio
Make your own	Two tools to make your own - storybuilder and storify Own site - would need to add link to your own such as website/facebook Best on developing/ongoing stories/event as they develop with specific beginning and end To allow user to curate large amounts of multimedia information try https://storymaps.arcgis.com/en/

DAY 5: Saturday 4 June, 2016

The final day of our workshop focused on making the information visually appealing and engaging. A persuasive data-driven visualizations project expresses an entire story in a powerful, morally compelling and rationally undeniable way. The group was asked to create a visual campaign and then present it to the participants to provide constructive feedback.

1. The dark and uncharted side of the visual landscape

The group was shown examples of the 'dark side of visuals'. Issues such as saturation, manipulation, and misinterpretation. The inappropriateness of the images was discussed. Key examples and takeaways are provided below.

- People already have images in their head - e.g. The Earth is seen as a 'blue planet' that is covered in water, in most people's mind the Earth is made up of 70% water. [This image](#) of the blue sphere on the surface of the Earth challenges that conception. See [here](#) for different locations of the sphere of water (over Europe and Asia). Even with new visuals we have to displace preconceptions.
- Complicated problems of using images when people have own opinions that you have to displace. Need to have visual narrative of the problem. You have to propose your idea and be better than other ideas out there.
- We are living in an image saturated environment. You cannot have a strategy of making something viral
- It is very easy to appropriate an image. Choice of what to watch is very high from advertisers and they can use humor. Watch the hair dove video [here](#).
- Think carefully about what sort of images work, how dramatic or graphic you should be. Would anyone care to see more of [this video](#)? Polar bears and making people reduce flight travel; this is an over exaggerated metaphor.
- Be careful when using a lot of maps - combining data sets - there is map overuse ([UFO Sightings Map](#)). People are used to looking and they might not be key visual because lots of people skim through maps.
- Why is it difficult to visualize things when using data? Two visuals show two different stories - less casualties dying - actual numbers of people - no lying same data set - no manipulation and can tell two different stories. See [here](#) for the case study or [Product of Slavery](#) website example.
- One has to be careful with expert assessments, as may give wrong impression if data is incomplete
- Lying with visual data is possible. See the case study we used [here](#). Issues include
 - Phrasing the problem with or without bias?
 - Much harder with some infographics to say what is wrong with data

2. Creative Brief Process

Throughout the workshop the group worked on elements of a [design brief](#). This session brought this all together and addressed the final questions that make up a [sustainable design brief](#). This was done in the form of an exercise to create two creative briefs:

- 'Safe' idea that is low risk but is also low-gain
- A more 'risky' idea that is high-risk but could be high gain

The group began planning their campaigns based on the theoretical and practical sessions during the last few days and presented their projects at the end.

The process begins with a description of the visual product in a written Q&A form. This form includes

1. Client information: focal person & contacts
2. Channels of Communication: poster, logo billboard, infographic etc
3. If producing the final output or testing ideas in a phased approach
4. Placement of communication: where will we use the materials? Is this for public display or for internal use?
5. Deadline/Timeline
6. Communications Strategy:
 - a. Project description/overview - main message want to convey
 - b. Target Audience: Age/gender. demographic;
 - c. Past Data/Research
 - d. Barriers of Communication - barriers to media, physical perceptual, social language, mobile phone vs website
 - e. Tone/Energy - what do you would like to create - sad, dramatic, humorous, authoritative - need to be able to explain reason behind chosen energy/tone - explain why
7. Other Important Details
 - a. Elements required to be included in materials - logos, color scheme,



The Group looking at the posters created

Feedback going through the creative brief

- Helps to hone in the answer into a sharper and more direct product. If the tone is direct then the audience should feel it.
- How do you select the designer? Grants often ask for a formal selection process. Tactical Tech said that when we have the privilege of time and money we ask various people for a quote for their ideas, how much it will cost and how long it will take. We often look at their portfolios. Important to show examples of inspiration to the designers.

- How to articulate the tag-line, message and things to avoid. This is one of the crucial elements of the brief. When you get this right then the process will be a lot easier.
- Complicated to work out the budgets. Tactical Tech often says sometimes we don't know how much it will cost but we know how much we have. We often provide a number of a portion of the budget we have and then see how the designers respond. It's a very different discussion as then it becomes a negotiation. Designers might want to work on a challenging problem that is not as commercial or they might want to have your project in their portfolio.
- A challenge was how broad to determine these audiences, whether they should be narrowed down and how narrow. Clearly defined audiences are easier to produce something for. The narrower the audience the better.
- A good creative brief is essential for creating successful advertising materials/ campaign. Too often, we give verbal briefs in the rush to get something done, only to find out later that it has actually cost us extra time and money.



Edo and his poster

Feedback from exhibition exercise

- How did it feel to be silent while people talked about your project?
- Good to talk in plain English rather than using acronyms/ jargons
- Once the campaign is out there - it's out there
- The process exposed flaws or mistakes we've made in creating them
- How was the whole exhibition? What trends or patterns did you notice?
 - ✓ All of the campaigns were quite similar - none were that risky
 - ✓ The tone was quite similar in the campaigns - everything was binary, black or white, enemy and good people; yet environmental issues are complicated - hard to simplify
- Should our messaging be more on what we want done rather than explaining the problem. Is a more direct approach needed?
- If everyone agrees that there is a problem, what is the minimum that our target can do that will make a difference? Could focus on small victories that are visible yet - not impossible to do.

- Perhaps the problem isn't that the river isn't a priority river but that people aren't interested in water. Is it because the problem is not as big a problem for other people as it is for you yet?



Participants evaluating posters

3. Evaluation and next steps

The workshop ended with everyone reflecting on what they learned and how they would incorporate these new insights into their STRIPE campaigns. The Mongolian and Indonesian short term and long term next steps based taken from the workshop are provided below.

INDONESIA NEXT STEPS

Short Term Actions (next three months)	Long Term Actions (by end of project)
Organizing Expert Meeting on Class Action & NGO Standing Lawsuit (Midle June)	Advocating the determination of Cijung TMDL by the Ministry of Environment and Forestry
Organizing Workshop on River Restoration: for Lawyers and Public Participation Activists	Launching Corporate Crime Report (Sinar Mas Group)
Developing an Infographic about list of companies and its violations	Producing A Guide for Community Journalism (for scaling up)
Finalization lawsuit document and Filed lawsuit in the Serang Court (Midle July)	Producing new data on Cijung River contamination by testing river sediment
Engaging communities in downstream part of Cijung River with the communities in upstream part of	Advocate the river restoration process through the Environmental Agency in Banten Province (the

Ciujung River (who lives near the point source pollutions) and with the academic institutions as well	methods and the budget allocation from Special Allocation Fund)
Creative Campaign in the celebration day or CFD moment	
Producing community news and short video testifying on water quality as companies impacts	
Assesment in Riau, Jambi and South Sumatera (relation Raw Material source for PT. IKPP and problem on the community)	
Advocating the participation forum establishment through the Environmental Agency in Serang Regency and the Banten Province parliament	
Produce and distribute a Public Participation Guide Book to the communities around the Ciujung River (especially Tengkurak Village)	
Connecting the communities along the river to conduct a mapping on Ciujung River in the summer to see a pollution pattern in a certain period of times	
Initiate a bigger coalition concerning water governance with other stakeholders from another watershed which will bring a same messages	

MONGOLIA NEXT STEPS

Short Term Actions (next three months)	Long Term Actions (by end of project)
Water governance comparative analyses report will be finalized incorporating the information learned from workshop	Water agreement, opinion, license will be assessed
Meeting with high level politicians and decision makers on water governance issues	Revisit the plan for infographic and photo contests to change it into combined training for potential partners to present data first.
Pressure Tuul River basin Administration to host a session and discuss the challenges and engage community members in their composition	To have the Clean Water Act and other relevant acts to be translated into Mongolian in order to use for policy advocacy purpose.
To explore more EPA public participation guidebook to use in the workshops and planned guidebooks	
Lab-testing the water discharge of the Bioplant to have more factual data.	

<p>Model standard (map and data) will be emdeded into www.baigaliorchin.mn</p> <p>E-handbook for citizens for Right to Information on Environment reflecting the ideas from the workshop.</p>	<p>Collecting evidence via mapping techniques used during the workshop from the project spots .</p>
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