Previous calls:

March 30, 2021
April 27, 2021
May 25, 2021
June 29, 2021
August 31, 2021
September 28, 2021
January 18, 2022
February 22, 2022
March 29, 2022
April 26, 2022
May 31, 2022
June 28, 2022
September 28, 2022

Current Call:

Sept 28, 2022: 2PM UTC (find your time)

Call #13: Presenting the Open Climate Campaign to make climate change research open access (helpful framing article)

- Presenter: Monica Granados

- **Welcome and housekeeping** *(TBD, 3 min)*
    - Housekeeping:
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        - You can also use the Zoom chat for comments and technical difficulties.
        - Please mute if you are not speaking.
        - Raise your hand if it seems like more than one person would like to speak.
        - Acknowledging that we're still in a pandemic and amid compounding crises. Everyone is experiencing this differently. Let's be kind and caring!
    - Why these calls?
        - We want to better understand how the open movement can respond meaningfully to the climate crisis.

- This is our Season 2 of Open Climate calls. Welcome! This Season we want to stir things up a bit, so if you are interested in facilitating one of the calls, let us know.
- We've taken a break in July and August to focus on some new upcoming activities. Coming soon – an Open Climate Coordinator and a 2023 Open Climate Fellowship program. Stay tuned…
- You can read more about past calls on our wiki and what we're learning in *Open Climate Now!* Or our 2022 article *Open Climate Then and Now* (along with all the other great articles in the most recent Branch magazine, dedicated to Open Climate)

Introductions. Silently write and a few people can share outloud **(please leave your email if you'd like information on other calls in this series, and our upcoming fellowship; we'll erase this information after the call).** Interested in facilitating one of the calls? Put "Facilitation" next to your name. (5min) –

- Shannon Dosemagen, Open Environmental Data
- Jean-Noe Landry, former Open North ED, Obama Climate Leaders network
- Matt Rumsey, Center for Open Data Enterprise (CODE)
- Andres Colmenares, co-director of IAM & Billion Seconds Institute
- Melissa Hagemann

Notes -- Setting the scene. Open Climate Campaign.

- Campaign for the next four years based on climate change and biodiversity -- https://openclimatecampaign.org/
- Her experience comes from learning that there are different ways to do science beyond publishing beyond a paywall
- After learning that science could be done differently, she joined "the church of open science"
- There's not a more important issue that the open community could be working on!
- People traditionally excluded from these spaces -- people from the GS
- Open sharing of research outputs is not the default. It's rather the way that people have taught others how to do so. Only around 40% of research in the US and Canada is open.
- The COVID-19 pandemic was a turning point, due to the the recognition that this was different: all the knowledge and research needed to be open and applied to this problem. The community responded and a task force was put together to advise and to ask for special exemption for scientific literature.
- In the last three years of the pandemic the number of open access research quadrupled. As a result of this, around 77% of COVID-19-related research is OA. This was because the pandemic affected every single person.
- Open access to research is key to the solution of practical problems.
- In this line, the greatest problem to be solved nowadays is climate change. Similarly to the pandemic, no one is untouched by climate change.
- We need to have climate change research open to combat this crisis.

- We recently launched the Open Climate campaign to produce by default open research that includes: publications, research data, software, OER and hardware. We need the research to be open to accelerate us to solve it.
- There are a number of research goals within the campaign (11)
    - Campaign messaging: reach audiences about open research
    - OA: understanding the state of Open Access
    - Identify legal and policy barriers: understanding the institutional barriers to enable OA
    - OA policies: government
    - OA policies: funders
    - OA policies: environmental organizations
    - Inclusion into international frameworks: how OA language can be included
    - Secure endorsements: how people talk about the campaign
    - Collaborations with traditionally excluded voices in open knowledge: ensure that this campaign takes a more inclusive perspective
    - Unbinding closed research: working with researchers directly
    - Special exception for climate and biodiversity research: taking from the experience of COVID-19 and monkeypox to biodiversity.
- However, we want all research to be open and not rely on special exemptions.
- Goal 9: traditionally excluded voices includes, for example:
    - Identify leaders from these regions: it can be a working group, calls, in-person meetings, etc.
    - Identify the important topics collectively
    - Highlighting these voices and amplifying them through the campaign
- Champions regarding open access are important. The results are different when there are people involved in the movement
- Chat: The HELIOS project is an initiative of around 50 universities working towards open scholarship: https://www.heliosopen.org/.
- Wondering about the issue of translation, both on the level of building community and then opening up materials for global use. I'm sure you've already thought of this :-) What mechanisms can be put in place to help with this, if there aren't any already?
    - English is a challenge for non-native speakers
    - Latin America is doing a good job of publishing in English, Spanish and Portuguese.
    - The power of machine learning and automatic translations
    - Example: https://panlingua.rxivist.org/
    - We will try to translate events automatically
- Chat: On collaborations with underrepresented voices, I recommend checking out the Open Climate Reporting Initiative by the Centre for Investigative Journalism: https://tcij.org/ocri/ (happy to help connect with the program manager in case anyone is interested)
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https://tcij.org/ocri/ (happy to help connect with the program manager in case anyone is interested)
- Recommended in chat: https://www.thegreenwebfoundation.org/publications/report-fog-of-enactment/
- From chat: On the previous topic, a somehow related initiative in the UK is the Net-Zero Design Research Network: https://gtr.ukri.org/projects
-

Group discussion (main room).
- What type of centralized support would be helpful to make your research open (publications, data, code)?
- What does open access mean to when you contextualize it to your country, region or institution?
- What is a topic around open access that you think is not getting enough attention?

June 28, 2022: 2PM UTC (**find your time**)

Call #12: How digital infrastructures can be a critical response against climate change?

- Presenter: Tech for Forests

- **Welcome and housekeeping** *(TBD, 3 min)*
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        - Please mute if you are not speaking.
        - Acknowledging that we're still in a pandemic and amid compounding crises. Everyone is experiencing this differently. Let's be kind and caring!
    - Why these calls?
        - We want to better understand how the open movement can respond meaningfully to the climate crisis.
        - This is our Season 2 of Open Climate calls. Welcome! This Season we want to stir things up a bit, so if you are interested in facilitating one of the calls, let us know.
        - You can read more about past calls on our wiki and what we're learning in *Open Climate Now!*
    - Today's call: How can digital infrastructures be a critical response against climate change?

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- Eloisa Marquez-Gonzalez, Evolution Consulting Group.
- Gui Heurich - Anthropologist and programmer

Notes -- Setting the scene. Tech for Forests presentation.

- Two case studies, one with people from upper Rio Negro and another with the Guarany people from the South around a practice called "anthropophagization of code", which means to establish communication between the parties in the fight for the defense of threatened territories, based on the roles of developers and users.
- This means, what are the worldview impacts of the Internet on indigenous communities
- The research found that the relationship between users and digital infrastructures does not start with code. It doesn't begin on GitHub. Otherwise, it becomes obsolete right away.
- The indigenous communities do not use software that is specifically written for them.
- Affection means building communities, which is important due to there being an asymmetry of power between those who create the software and those who use it.
-

Group discussion (main room).

- Anthropophagization is a very Brazilian concept which means to not accept external knowledge as a given but to digest it alongside the local culture.
- It's not about bringing a box of technologies because we need to create relationships to understand their needs, how they use technologies and digital infrastructures.
- When we translate, we "localize" in a way that departs from their reality.
- The Internet is like the shaman: helps us to cure diseases, like an oracle to know what we don't know, and a tool that we use for communication for the defense of people.
- The Internet is paradoxical because it is good and bad at the same time.
- Another question is "what is security?" "How can you feel safe?" One indigenous leader once said: "I feel safe when I know when and where we're stepping in, what is our land". This is an example of cannibalizing code: how can they leave our lands through the Internet
    - They threw some trees and how the Internet came from the sky
    - https://assets.survivalinternational.org/documents/1158/the-falling-sky-long.pdf
    - https://letrasindomitas.files.wordpress.com/2018/05/2013-davi-kopenawa-bruce-albert-alison-dundy-the-falling-sky_-words-of-a-yanomami-shaman-the-belknap-press-of-harvard-university-press.pdf
- It's important to note that many communities have decided to not come in contact with white persons. The question is how to protect their choice to not come into contact with us in this interconnected world.
- How can we get people on board in coding? A lot of open source stuff is done by massive companies funding this work.

    - A lot of people in Brazil in 2000's were eager about FOSS and technology and how it can support freedom of expression.
    - This changed in ten years. Many of the new people working in FOSS were more connected to the market, with private sector, because it is something that gives a higher income
    - It was important to “bring the movement inside” because people will not leave their jobs
- https://www.rhizomatica.org/hermes/

May 31, 2022: 2PM UTC (find your time)

Call #11: What can we learn about open data from the Environmental Participatory Monitoring of the Santa Lucía River in Uruguay?

- Presenter: Ana Tuduri

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        - Please mute if you are not speaking.
        - Acknowledging that we’re still in a pandemic and amid compounding crises. Everyone is experiencing this differently. Let’s be kind and caring!
    - Why these calls?
        - We want to better understand how the open movement can respond meaningfully to the climate crisis.
        - This is our Season 2 of Open Climate calls. Welcome! This Season we want to stir things up a bit, so if you are interested in facilitating one of the calls, let us know.
        - You can read more about past calls on our wiki and what we’re learning in *Open Climate Now!*
    - Today’s call: Approaching the Intersection of Environmental Justice Data and Digital Rights: An Opportunity for Open Climate Collaboration?

Introductions. Silently write and a few people can share outloud **(please leave your email if you’d like information on other calls in this series; we’ll erase this information after the call).** Interested in facilitating one of the calls? Put “Facilitation” next to your name. (5min) –

- 14 attendees total
- Alek Tarkowski
- Iryna Kuchma
- Monica Granados

Notes -- Setting the scene. Ana Tuduri's presentation.

- Level of contamination in Santa Lucia river
- Supplies water for consumption to 60% of population
- Water is a human right, in this context in 2019 carried out workshops to ID local environmental problems, neighbors, teachers
- Work collaboratively to figure out points for monitoring
- 2020: design course to provide framework for monitoring, course – human rights approach – first edition of course was in 2021
- 20 college students
- Asamblea por el Agua -- Assembly for the Water
- Impacts:
    - Education
    - Construction of knowledge
    - Broad skill development across different professional
- How to communicate the information in a substantive manner
    - What are the data that we need to collect?
    - How to communicate data in a more accessible way?
    - How to turn that data into action?

Group discussion (main room).

- Interesting angles – community, local schools, project is based in Uruguay – situation of environmental defenders in L.Am – Escazu Agreement – sets up relationship between environmental data and human rights – can you talk about relationship between this project and Escazu?
    - Important framework – constitution of Uruguay, access to water and sanitation is a fundamental right
    - Approved National Water Policya nd Plan – sustainable water mgmt, coordination of public policies, research and innovation for management of water resources
    - Human right council – right to safe, clean, healthy – national standard on environmentla matters
    - Public participation, access to justice (?)
    - Now need implementation of the Escazu Agreement – happening right now in Uruguay
- How to implement?
    - Need a law/guidelines for implementation – have a good law on access to information, but Escazu Agreement may need to make some changes
    - Have access to information, process and specific access to information for environmental problems and matters – necessary
    - Uruguay has some space for social participation in environmental matters, but in reality it doesn't work well, would point to a start
    - Related to justice about enviornmental problems, do have data about that
    - Access to information, data about justice of environmental issues, and one more that I missed…

- Designed participatory program working with youth – what gap are you filling in public data collection space with a participatory space? How does working in a way where you're also collecting open data benefit the project? Supplementing the gov't?
    - Real participation for citizens in these matter – study process of participation in water quality problems, kind of project is good or are giving an opportunity to residents to have first experience with science
    - Problem with gov't data – difference of data we collect responds to problems of local society and local society – responsive to what/when/why: what info is useful for, when it's useful, matter of time (maybe need info before for instance)
    - For who is useful the data?
    - Q: Is there a public demand for environmental health?
    - There were issues with the quality of the water -- bad odor & bad taste, back in 2016. In that moment they started
- Gov't has a lot of rules around publishing open data – national contributions, follow and tack greenhouse emissions by sector. Have good and disaggregated data, some things they are doing well
- WRI, published a paper a couple of years ago – research on implementing open data strategies, look at two cases (Chile and Uruguay
- Demand for environmental health issues? Was there a community making this demand?
    - More participation in these issues, they saw the data that the gov't published is not simple to read – super complex to understand for local community
    - Next steps of project, we start to work on this problem, to make the data more accessible
    - Take this data and make actions
- Interesting Project. Along the lines with Alex, how was the process like when working on sharing the data on open Access? What methodology did you use?
    - Just starting on this and can report on it next year.
    - Worked hard on protocols last year – what variables we'll taste, how to x data we collect
- I'm curious about how you're thinking about government data reusability and how you'll start in on that process?
    - Work with scientific teachers – they create the protocols
    - Barriers to accessing gov't data – organization called x, made a lot of access and never had an answer, in process we work together to understand how to make access and try to make some of x with students, was a good example of how to try and help the community
- After Alison's question, I have one: when we think about open data, we often think about the output of activities like these. What kind of open information could be useful to people who are actually going to the river or organizing citizen initiatives like these?
    - Protocol's were made together with the community – wasn't just scientists who said "you should do this". Listened and worked together – a different way of doing science.
    - Data for other parts of the world, involvement of students and local children

- From a legal and environmental rights perspective, I'm wondering about the anti-collusion and anti-corruption angle for this initiative. Is the data used to make legal cases? Is this one of the motivations of participants in the initiative?
    - Specific legal case in Santa Lucia – grease factory – but don't see data collecting is useful for this case.
    - Right now it's useful for education, science for kinds, process – need a long term to confere data, maybe need more time – 5-10 years more?
    - Compare data from 2021 and 2025 and see how it'll be used
    - Legal procedures – need experts, tests that are validating for the legal case
- thank you for sharing your work with us, Ana! I have a question about the notion of "openness" — could you tell us a bit more about how it is understood by the researchers and the research co-participants… and how effective it is in actually getting people mobilized to participate in the context of the water assembly?
    - Observatory for government for open data
    - Not question about open data – question and demand is about participation in these matters, how to involve future generations in these topics
    - The other thing that is important for the community is demand – have an opinion when they decide the policies around quality of the water – not about the open data, about participation, participation in this matters
        - Meaninigful participation and voice
        - Openness appears more as a tool? An accessory?
    - Openness is a tool, but not enough. Real participation in these matters – important to start and talk about justice in this case, environmental cases
    - Don't have data about this in Uruguay
    - Real problem is the participation and the data about justice in these cases – access to justice, we don't know enough about this
- How are members of the community finding out about your work?
    - Rio Abierto – published notes in local media, invited neighbors and local authorities (la diaria is a national newspaper for those of you who don't know)
    - Moved to Santa Lucia city and have a collaboration from organization called Familia xx – neighbors and students
    - Work with schools from the city
        - University/high school students?
    - Distinct elements of Uruguaian culture that make it easy/hard – see there's a lot of people sitting around in a circle – collective decision making, made it easier to convene and facilitate people.
        - Validate citizen data – government says they do the same samples/tests
        - Make a framework with faculty of science – training people to validate data
- Those of us working in open movement – abstractions around openness, type of right being used, best license. Reason why we are working on Open Cliamte is because we want to be relevant to projects like yours – go on a river, get their feet wet – not necessarily academic work (like which license is the best). You're connecting the action with human rights, that's important. How can oppenness be useful to you? What are the

tools that are most useful for you? Where does openness come in and how can it be useful so communities can think about releasing information?
    - How to communicate data in a simple way, open format
    - Information needs to answer the demands of the community. In the process of making the data and collecting the data, the local community needs to be involved. This is the goal of the project.
    - Process of deciding which data we need.
- Was the data validated by government officials ever contested by the community? Any examples?

April 26, 2022: 2PM UTC (find your time)

Call #10: Approaching the Intersection of Environmental Justice Data and Digital Rights: An Opportunity for Open Climate Collaboration?

- Presenter: Jean-Noé Landry

- **Welcome and housekeeping** *(TBD, 3 min)*
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    - Why these calls?
        - We want to better understand how the open movement can respond meaningfully to the climate crisis.
        - This is our Season 2 of Open Climate calls. Welcome! This Season we want to stir things up a bit, so if you are interested in facilitating one of the calls, let us know.
        - You can read more about past calls on our wiki and what we're learning in *Open Climate Now!*
    - Today's call: Approaching the Intersection of Environmental Justice Data and Digital Rights: An Opportunity for Open Climate Collaboration?

- **Special announcement:** *(TBD, 3 min)*
    - Call for contributions that is now open from Branch Magazine. The special issue is focused on Open Climate. We welcome submissions in multiple formats -- written, audio, video, code -- on topics that help us unlearn, reimagine, regenerate, build and debate together on climate, sustainability, and a just environmental future. Submissions are due April 20th.

Introductions. Silently write and a few people can share outloud **(please leave your email if you'd like information on other calls in this series).** Interested in facilitating one of the calls? Put "Facilitation" next to your name. (5min) – 12 in attendance

Notes -- Setting the scene. Jean-Noé Landry (15 min).

- Data is not the problem; if anything, maybe there's an overabundance of data
- Intersectional perspective -- people are also acting because they are suffering the consequences of climate change
- Vulnerabilities to climate because of how we manage resources – struggled to find resources; good sources of information to protect himself & his neighbors
- Open Data Charter -- prioritize different types of data; the "Open Up Guide" -- https://open-data-charter.gitbook.io/open-up-guide-using-open-data-to-advance-climate-a/whats-missing
- They're talking about emissions, about standards, but it wasn't necessarily seen as social / climate justice elements
- Is there such a thing as Environmental Justice Data?
- Scientists: "I develop models, scenarios"; vulnerable communities had to interpret the data in order to develop their analysis for something that was useful to them
- Perceived risks of sharing data.
- Experience -- what are their information needs and resources for working with their vulnerabilities? -- he didn't start by talking about data, that makes people switch off. What are the risks of collecting data for vulnerable communities?
- Engaging citizens for data collection, there's definitely a digital rights angle to it.
- Emerging conversation

Group discussion (main room).

- Have you encountered environmental justice data in your work and collaborations?
- What are the digital rights issues related to such data types? Any specific examples or situations come to mind?
- Does the intersection between environmental justice data and digital rights matter for the open climate community?
    - If so, what can we do about it? How can we collaborate?
- Who should be involved in this conversation?

- Scann: Asking for a lot of data in order to access funds – problematic aspects to this?
- Alex S.: Wikimedia. Work with communities in global south, noticing how climate movement as formed – CJ is behaving differently than EJ behaved in north american. Are you encountering different data needs – EJ organizer v. climate justice organizer, are they asking different questions of the data? Organizer in Liberia, don't so much need EJ data – data so that we can adapt in the face of something we can't stop.

    - Can't speak to how global south views. At setting at Colombia Univ. offices – type of issue is to your point. Discourse isn't a primary lens.
    - What you're naming is important from ethical perspective – history and perspective, something that is adopted worldwide, careful and sensitive about this
    - For EJ orgs spoken to, center for open data enterprise – up to 100 some organizations, asked these organizations, what data are you using, obstacles, access. Pretty concerted effort around documenting what data needs are based on different problems
    - Accountability to community for EJ orgs is important.
    - Environmental rights – connector on a global scale around different issues we can have better context driven problem framing. If facing a rising sea – in India or US, there's probably core datasets
- Iryna shared: On vulnerable communities, I like the approach in the "Statement of the African Academy of Sciences' Biospecimens and Data Governance Committee On COVID-19: Ethics, Governance and Community engagement in times of crises (AAS, 2020)": Informed consent processes should consider the vulnerability of the potential participants and put in place adequate measures to protect them. https://www.aasciences.africa/sites/default/files/2020-04/Covid-19%20Ethics%2C%20Governance%20%26%20Community%20Engagement%20in%20times%20of%20crisis_0.pdf
- And The South African San Institute has a good Research Ethics Code 2017 http://trust-project.eu/wp-content/uploads/2017/03/San-Code-of-RESEARCH-Ethics-Booklet-final.pdf - Prevent marginalisation of vulnerable groups; Encourage engagement from vulnerable groups; Display trustworthiness and warrant trust
- Sajana P: How environmental research can prioritize EJ issues – reconcile academia and doing science against backdrop of climate crisis. Culture and tech space. How can we come up with a flexible definition of that term (EJ)? Different tone in Canada, US, Lebanon, etc. How can we balance all of these things?
    - Part of what is being named, having spoken with different climate scientists – what are boundaries of what we know through climate science. What is community wisdom? What is the bridge? How are we explicit around what we know and don't know. Probably more interesting to understand than being held up on definitions.
- Jim C: Data and use for modeling – forecasting was inaccurate, but gov't based decisions and policies around poor modeling – almost tainted by pandemic modeling.
- Douglas S: Data partners such as ODI for participatory practices – what is your view on involvement of Wikimedia? Campaign on wiki for human rights – involvement of wikimedia for human rights?
- Sanjana P (from chat): I really believe it would be beneficial to have a "Hippocratic oath for engineers" where we have to think carefully about human impacts of our work - many engineering industries would completely fall apart rn if that were the case. We're exploring some of these thoughts through Earth Hacks' environmental justice in tech blueprint

    - Shannon: This might be of interest to you, Sanjana: https://openhardware.science/gosh-manifesto/
- Iryna K (from chat): And The South African San Institute has a good Research Ethics Code 2017 http://trust-project.eu/wp-content/uploads/2017/03/San-Code-of-RESEARCH-Ethics-Booklet-final.pdf - Prevent marginalisation of vulnerable groups; Encourage engagement from vulnerable groups; Display trustworthiness and warrant trust
- Alex S in chat: https://diff.wikimedia.org/2022/04/20/an-organizers-perspective-part-iii-wikimedia-is-a-key-part-of-global-climate-and-sustainability-communications-now-is-the-moment-to-embrace-it/
- Pyrou: Take carbon financing as an example for solving climate crisis. Regardless of how you evaluate the stock of carbon and the value of this - if you can't determine who has rights to this 'stock' then you perpetually make communities vulnerable.

March 29, 2022: 2PM UTC (find your time)

Call #09: Examining the potential for open in climate communication: lessons from the Wikimedia Movement

- Presenter: Ruby Damenshie-Brown, Senior Content Campaign Fellow 2021/2022- Wikimedia Foundation
- Facilitator: Alex Stinson, Wikimedia Foundation

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    - Today's call: Examining the potential for open in climate communication: lessons from the Wikimedia Movement

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- Lilly Winfree, Open Knowledge Foundation
- Bogdana Rakova, Mozilla Foundation
- Michelle Thorne, Mozilla and the Green Web Foundation
- Macholi Chris Benard
- Alison Parker, the Wilson Center
- Carlo Brescia, WikiAcción Perú
- Monica Granados, presently at Environment and Climate Change Canada, Creative Commons in April
- Jim Hayes, wikimedia DC
- Karien Bezuidenhout, Shuttleworth Foundation
- Sruti Modekurty, Erasmus Masters in Urban Climate & Sustainability, Facilitation (maybe?)
- Ryan Fobel
- Emilio Velis, Appropedia
- Alison Guzman, Curationist.org

Notes -- Setting the scene. Alex + Ruby (20 mins).

Improve content to raise awareness
10-points recommendations on Wikimedia, such as creating partnerships to advance the mission of the movement

- Every single time climate change is mentioned on a Wikipedia page, it creates an opportunity for communication
- I theorize that it is the only platform that communicates content about adjacent subjects to climate change in specific languages such as Farsi; the numbers need a caveat
- Wikipedia is a good platform to talk about why open knowledge is important
- Platforms only take the introductions of pages, therefore, leaving out the possibility of sharing climate-change-related information
- Also accidentally spreading some misinformation -- recent article by the BBC; https://www.bbc.com/news/technology-59325128 Wikimedia covers about 300 languages
- Wiki for Human Rights is focusing on the right for a healthy environment.
- Many people think of "climate science" when the subject of climate change comes up; but there's an opportunity to talk about social decisions to better adapt & social changes needed
- Ruby: gathered feedback from organizers to see where they could improve
- Wkimedia organized general office hours for specific regions. It makes people feel at home; one-on-one sessions were scheduled as well to see how members participated in campaign

- Youth Climate Council (YCC) Ghana is a campaign to create relationships with climate activists in Ghana
- Wiki for Human Rights also held events in South Sudan and Nigeria. Users enter the Wikipedia movement with the interest to talk about biographies or more “direct” activities. Speaking about climate change requires to think outside the box and focus on more critical subjects
- Alex: We are also learning that folks don't always feel confident in the the "climate crises" or "human rights" as topics that they can act on. They often have good ideas, and actually understand a lot -- but they need practice talking about these topics.
- Ruby: climate change has had a real impact on our lives from a retrospective view, for example in having enough water at home. Environmental issues are happening every day, and this campaign is bringing that connection for participants.
- The goal is to have wikipedians understand how climate change can connect with everyday lives
- We have noticed that wikipedians are interested in climate change beucase it’s the subject of the day. They want to do it right. This is not the usual biography documentation, because they’re looking at events that they’re taking a part of. They don’t need to be experts, but it helps them understand how connected they are to the subjects they write about on Wikipedia
- What is the way to create a common vocabulary regarding environmental effects for wikipedian to participate?

Small group discussion. First silently write in the GDoc and then discuss *(small groups, 10min)*

GROUP 1

- How do we create a space to empower local communities?
    - What is the “local” angle on a global documentation need? How do you make it human? Etc?
- How do we build their capacity to work with the open movement?
- How do we attract new audiences to the open movement and align their interests?
    - How can we represent climate information and its process for the skeptical?
    - How do we represent the process of creating knowledge?
    - Alot of the change is connected to emotions, need to change the dominant economic model -- that emotion is frustration and anger -- how do we build a narrative linked to a system of change? How do we capture that?
        - How do we make sure that we pay attention to theory of change -- framework -- two loop model theory of change -- transition of a dominant system and an emergent -- seeing yourself and your work between these different systems?
        - Empowering the relationships can be really
    - How do we help people see the environmental/human rights connection? When can we pinpoint those legal obligations?

GROUP 2

- How do we create a space to empower local Communities?
    - Engage, embrace and align their interest
    - Identify barriers of engagement and develop solution
    - Platforms to share their experience and stories
    - Love the welcoming groups in different languages. This is really important!
    - I was also thinking about practitioner communities: not just geographic ones. For example, I work a lot with digital rights, digital sustainability communities who are active in different places worldwide. How can we encourage these communities to get involved in WP editing for their topics?
    - Think about economic viability - who has free time, who can volunteer vs who needs to be paid to set time aside to contribute
    - Also economics of open vs closed - what are the models for accessing this data now, how is it supported, how will the collection/access/hosting/writing/etc be funded going forward?
    - Build sentiment of collectivity, we have shared interests and objectives, together we can achieve greater positive impacts
- How do we build their capacity to work with the open movement?
    - Some resources - synchronous and asynchronous - explaining IP, openness, the key issues, questions, and impact. You can only really get open and be fully open when you understand the impact and alternatives.
    - I think coordination is a big part of capacity - I think there can actually be unintended competition in this space that could be ameliorated by coordinating activities so that funds are used efficiently
    - Find connections to directly useful open initiatives (specific data, campaigns, etc) that demonstrates relevance
    - Bespoke workshops/outreach -- like you're doing! Helping them see the impact editing could have. Support in editing.
    - Provide support on edits/revisions/challenging citations/discussions and other tricky things that show up after an article is published.
- How do we attract new audiences to the open movement and align their interests?
    - First identify target audiences: persons/collectives/institutions aligned with our interests (specialists, researchers, activists, youth); then reach out to them and communicate them about the opportunity to share/update/construct knowledge in WIkipedia; afterwards, create spaces for dialogue, reflexion, training, development
    - Help articulate how open serves their needs -- and also by listening as to where openness may have been a barrier / not working for them before
    - Be clear about what "our" interests are
    - Determine what the incentives are for these communities that we are not reaching and supporting those incentives/reasons

GROUP 3

- How do we create a space to empower local Communities?

    - I'm interested in the idea of local decision-making, what should people do in their own lives, reduce their own impact.
    - It depends on local context, the power balances for these kinds of things
    - How do we bring new people to the open movement. Some people want to join but there's not much information about how beneficial it is
    - I think there might be existing spaces that the wikimedia initiative can plug into, such as libraries, schools, public participatory workshops led by governments
- How do we build their capacity to work with the open movement?
    - We can work with schools and universities to help educate people and in turn educate others as they learn
    - Bringing newer generations. They have more energy and want change to happen, but they feel disenfranchised. But based on today's presentation, you don't need to be a phd and this is a great way to capitalize on the energy and desire
    - Coaching and capacity building is great: it provides confidence which is really important to move to action.
    - Some people anare neglected. Perhaps we need to work with
- How do we attract new audiences to the open movement and align their interests?
    - I think improving youth could help with this. There's a lot of energy among the younger generations to do something but they often feel disenfranchised.
    - Social media is one of the best ways to attract people but it is also very toxic! I don't want to depend on Facebook to solve these problems. We need open technologies to solve these problems
    -

GROUP 4

- How do we create a space to empower local Communities?
    - The campaigns in the past have been global, and now the campaigns are trying to be drill down -- how do we build local people that are interested in the topic and then join them with the Wikimedia movement local
    - Global campaigns: think this at scale, understand the local interest around the world, a mechanism that works at scale, campaigns are the best way to do that, centrally organized that offers a platform for a local organizer to come on -- adaptation -- internationally // flexible, modular, adaptable at the local level, entry way where you can have an idea on what to do in this new environment. Function of welcoming + bring with them their local knowledge
    - Global campaigns bring in organizers
- How do we build their capacity to work with the open movement?
    - Started a bit to edit on their own -- low barrier to enter the community and feel they can work on their own
    - Started with the Wiki Loves SDG
- How do we attract new audiences to the open movement and align their interests?

Past calls:

February 22, 2022: 2PM UTC (find your time)

Call #08: How can libraries help mobilize open knowledge on climate

- Presenter: Iryna Kuchma, Electronic Information for Libraries (EIFL).
- Facilitator: Evelin

- **Welcome and housekeeping** *(TBD, 3 min)*
    - Housekeeping:
        - We'll be recording the call, transcribing it, and sharing on Appropedia.
        - You can follow the agenda and take notes in this GDoc.
        - You can also use the Zoom chat for comments and technical difficulties.
        - Please mute if you are not speaking.
        - Acknowledging that we're still in a pandemic and amid compounding crises. Everyone is experiencing this differently. Let's be kind and caring!
    - Why these calls?
        - We want to better understand how the open movement can respond meaningfully to the climate crisis.
        - This is our Season 2 of Open Climate calls. Welcome! This Season we want to stir things up a bit, so if you are interested in facilitating one of the calls, let us know.
        - You can read more about past calls on our wiki and what we're learning in *Open Climate Now!*
    - Today's call: How can libraries help mobilize open knowledge on climate?

Introductions. Silently write and a few people can share outloud **(please leave your email if you'd like information on other calls in this series).** Interested in facilitating one of the calls? Put "Facilitation" next to your name. (5min)

- Fernan Federici, Univ Chile & GOSH (Open Hardware community). Working on open biotechnology for research and education
- Charlie Schweik, U of Massachusetts Amherst. I've got a new op-ed (draft) relating the failure of covid vaccine open sourcing and trying to say we need to do it differently in climate that I'd love to share with anyone interested for possible collaboration.
- Jacqueline Dearborn, Biodiversity Heritage Library / Smithsonian Libraries and Archives (contact us! How can we help more? dearborjj@si.edu)

Notes -- Setting the scene. Iryna Kuchma (10-15 min).

- Open science skills: develop the ability to publish open research
- Open infrastructure: we support set up development and upgrade of institutional of national and international infrastructure, supporting the development of policies for these infrastructures.

- Open access is a path that requires more than quick fixes. In turn, it requires strong infrastructure, resources and infrastructure and specific work to make work and research available
- The open science recommendation by UNESCO was shared last year
- This data is accessible and “can save lives”. One example is the COVID-19 sequence. Other examples are climate change and other important types of information.
- Traditional publishing does not fit the purpose, for not being transparent and slow.
- Preprints are a real dialogue between authors and reviewers as it has been seen in both of these examples. The Asistant of Director of UNESCO has mentioned that open science is not only good for COVID but it’s good for science in general, ensuring that more people participate. The same goes for access to vaccines, although we aren’t still there yet.
- Open science should be a guiding principle for climate change
- We came up with this idea to have a campaign for opening climate research. We planned it by hiring a campaign manager and we should be rolling out in April. The idea is to introduce open science policies for research founders, to ensure that researchers share their outputs correctly. Our focus is science literature but we want to find opportunities for open education.
- Looking back, we want to identify climate organizations to work with.
- Project towards public library in Colombia for indigenous communities. Libraries collaborated with kits to create videos and stories of how climate change affects lives.
- Project in Bulgaria where a recycling project for plastic was rolled out. https://www.eifl.net/eifl-in-action/protecting-environment-innovation-award-1 The plastic was used for the 3D printer.
- Alex: Misinformation / disinformation / knowledge gaps issues in local languages around climate change & biodiversity issues; more allies in that field?
    - They are walking into countries where climate change is not a big issue, it’s not a topic of debate, there are so many issues in their partners countries where climate change is not a big topic.
    - It’s more like she hasn’t seen a lot of information on climate to begin with.
    - They have to enable easy access to the recent information about climate change.
    - Using Wikidata to map some of the topics they are missing.
    - Index of climate change research in Portuguese.
    - The world in which they live doesn’t have English as their primary language for publication.
- Emilio: curious about how platforms can support pre-prints? People from different parts of the world doing technical writing, having to push for more structured data, turning into a pre-print. A way to work for libraries, for sustainability, climate change related content, to make those connections, to make it more usable even if it doesn’t make it as a standard?
    - Decouple peer review from publishing. Publishers are not the only way to do peer review.

    - With the technological level (CORE), what the project does is if you make a pre-print available, it notifies someone that might be interested in doing a peer-review.
    - Distributed scholarly system of publication. If we even need the publishing stage. Notify project.
    - About pre-prints, they had an interesting decision in a university center, introducing policies that encourage researchers to make their articles first available to receive feedback, they noticed that constructive feedback, they introduced pre-prints as a way to improve their articles.
- Charlie: Research libraries' at universities, but broader, sharing best practices in innovation in actual climate change adaptation and resilience? Look actively around by-laws, and trying to inventory those, they're doing it in a wiki, in a Moodle, scale-up that. Libraries have been working in that space?
    - Asked libraries in Western Europe countries, but they're not doing anything like that.
    - If something like that was publicly available.
- Max: support for shareable infrastructure, for people that have the knowledge to do machine learning, different skills to acquire, if they don't have the resources? Are you aware of anyone looking into it?
    - European science clouds -- https://marketplace.eosc-portal.eu/services/
    - Libraries are not involved in providing those resources, but rather is the long tail of science, small datasets.
- Evelin: problems with APC.
    - This is why we didn't design our campaign around designers. We had been discussing this. We wanted to make sure that access was enabled in an equitable way. There are good quality journals that don't charge APCs.
    - Research assessment and availability of local platforms it's very important, in Latin America there are a lot of these platforms, in Africa it is more at the national level, and is not necessarily regional. In Kenya there's a local network of universities.
    - We're past those times where we want to have open access at any costs.
- Emilio: bring together the activist movement and the open source movement. One of the key partners in this is library, there's information to be disseminated to the public.
    - Libraries can offer their expertise in accessing data, data sharing, data re-use, platforms for finding content, making content available.
    - Community governance models, that's what has been missing before, some of them don't have clear governance models to participate in data sharing.
    - An interesting project that worked -- https://ospoplusplus.com/
- Evelin: SDGs -- how can we get libraries to talk more about?
    - Have projects that they can share at libraries to implement local solutions
- Alex: What does excite librarians to do this kind of projects in resource-constrained environments?
    - The less resources you have, the more creative you get. I.e. in Palestine they did a DIY book scanner

- Open source projects when they took old hardware and recycled those computers
- They don't have examples yet around climate change, there are not yet a lot of examples around the collaboration between libraries & climate change

Small group discussion. First silently write in the GDoc and then discuss *(small groups, 10min)*

GROUP 1

- How can libraries support the open data & open knowledge needs of the climate movement? (i.e., by supporting research data management, training good practices for data collection, etc.)
- What kind of messaging, strategies or tactics do we need to make open practices the default for climate research?
- What kind of collective action would be needed to remove copyright and other IP restrictions to climate research?
- How could libraries facilitate dialogues that could spark more connections between the agendas of the open and climate justice movements?

GROUP 2

- How can libraries support the open data & open knowledge needs of the climate movement? (i.e., by supporting research data management, training good practices for data collection, etc.)
- What kind of messaging, strategies or tactics do we need to make open practices the default for climate research?
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GROUP 3

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- What kind of collective action would be needed to remove copyright and other IP restrictions to climate research?

- How could libraries facilitate dialogues that could spark more connections between the agendas of the open and climate justice movements?

GROUP 4

- How can libraries support the open data & open knowledge needs of the climate movement? (i.e., by supporting research data management, training good practices for data collection, etc.)
- What kind of messaging, strategies or tactics do we need to make open practices the default for climate research?
- What kind of collective action would be needed to remove copyright and other IP restrictions to climate research?
- How could libraries facilitate dialogues that could spark more connections between the agendas of the open and climate justice movements?

January 18th, 2022: 2 PM UTC (find your time)

Call #07: Frontline organizers and the knowledge commons

- Presenter: Matt Rota, Senior Policy Director, Healthy Gulf.
- Facilitator: Evelin Heidel

Agenda

- **Welcome and housekeeping** *(Evelin Heidel, 3 min)*
    - Housekeeping:
        - We'll be recording the call, transcribing it, and sharing on Appropedia.
        - You can follow the agenda and take notes in this GDoc.
        - You can also use the Zoom chat for comments and technical difficulties.
        - Please mute if you are not speaking.
        - Acknowledging that we're still in a pandemic and amid compounding crises. Everyone is experiencing this differently. Let's be kind and caring!
    - Why these calls?
        - We want to better understand how the open movement can respond meaningfully to the climate crisis.
        - This is our Season 2 of Open Climate calls. Welcome! This Season we want to stir things up a bit, so if you are interested in facilitating one of the calls, let us know.
        - You can read more about past calls on our wiki and what we're learning in *Open Climate Now!*
    - Today's call: How are environmental defenders using the knowledge commons?

Introductions. Silently write and a few people can share outloud **(please leave your email if you'd like information on other calls in this series).** Interested in facilitating one of the calls? Put "Facilitation" next to your name. (5min)

- Evelin Heidel (Scann), Open Climate coordinator
- Michelle Thorne (she/her), co-organizer of Open Climate, also with Mozilla and the Green Web Foundation
- Phil Bresnahan (he/him), UNC Wilmington, Department of Earth and Ocean Sciences and Center for Marine Science, interested in coastal and climate citizen/community science.
- Rob Rozansky (he/him), Global Energy Monitor
- Emilio Velis (he/him), Appropedia Foundation
- Stanislav Kozlovskiy, executive director of Wikimedia Russia, associate professor of Lomonosov Moscow State University
- Ivan Zasurskiy (Zassoursky), Russian journalist and climate activist, founder of https://climatescience.ru/ (open science climate change repository), member of Presidential Council for Civil Society and Human Rights, professor of Lomonosov Moscow State University, producer of the Russian HRC ecology and climate committee paper on climate "The Green Turn" (in eng. https://climatescience.ru/greenturn.pdf), project Noosphere.ru, Webpublishers Association
- Matthieu Brient fing.org
- Max Mahmoud Wardeh, Technical coordinator at the Internet of Production Alliance; one of my side projects is lessimpact.org; open data / metadata standards
- Karien Bezuidenhout, Shuttleworth Foundation
- Lilly Winfree, Open Knowledge Foundation & Frictionless Data
- Carole Excell, WRI
- Jonathan Poritz (he/him)
- Iryna Kuchma, EIFL,
- Mario Reyes
- (Daniel Wessolek, Open Knowledge Foundation Germany)

Setting the scene. Matt Rota (10-15 min).

Matt's presentation: https://docs.google.com/presentation/d/e/2PACX-1vQUdEMd4_AXJtMO0IABrD4qUEkHgj1TuXCP8UxujNUvH_1lKWnlNd1kIrcRIalhETGm4acFllkQHQi5/pub?start=false&loop=false&delayms=3000

- "Holy cow it's hard to get data from Google!"
- Sharing some resources if persons are interested on open data and climate and pollution https://www.wri.org/research/implementing-open-data-strategies-climate-action-suggestions-and-lessons-learned
- Lot of the data is not usable // not accepted by the govt. Agencies; the data citizen groups generate is not incorporated into govt. agencies

- Public participation grades: they rated how the different states where using all this data; Matt can share this report
- Visualization tools -- data visualization is so important in the work they do in the frontlines; you can put a lot of numbers but nobody really understands the issue; but when you put stuff in a graph, people can really see the issue by realizing the impacts, the causes, what they are seeing
- This is great also as a way to mobilize policy -- they can understand these things by seeing them; climate justice movt. Moving forward
- Forensic architecture: they're doing significant work towards visualization; they've done a very interesting data viz about cancer alley
- Also this amazing piece about the area Matt's talking about: https://www.nytimes.com/video/us/100000007778616/louisiana-cancer-alley-cemetery-african-americans-video.html
-

Small group discussion. First silently write in the GDoc and then discuss *(small groups, 10min)*

GROUP 1

1. How can the open movement help the Environment and Just Transition movements?
2. What are some strategies to get governmental agencies to accept community and citizen data?
3. What could be done to make environmental data more open & accessible? (i.e., from a policy, regulatory, community, technical, etc. perspective)
4. How do we best communicate synthesized data from open and governmental sources to communities impacted by pollution?

- Max Wardeh: requesting data from state and corporate actors assumes good intentions from them, yet there is a lot obfuscation. That has been a real issue.
- Matt: These organizations want to show that their waters are clean, or "bureaucratically clean up waters"
- How do we create an open data environment? It's hard. There are somethings, we collect data that we don't share because we're getting ready for a lawsuit, so it is shared eventually
- You also want to keep your job. There are incentives to keep things private (i.e. funding). But this is about the networks. A good place to start is to help organizations network their data monitoring to have a better repository that is navigable and that would be another potential place to start with citizen science
- How to work with students who are working with communications, data visualization, etc.
- Project mentioned: Land-loss lookout: IR photographs in Louisiana wetlands to see environmental change. This system can allow anybody to go and see impacts in agriculture and other environmental issues. All this is confirmed by experts and it shows

agreement between students and experts. The challenge is to fit them into a small semester.
- Zassoursky: we need a list of things we want from the Govt or agencies or corporations or universities, whatever, and go for it. Time is right, administration will be supportive

GROUP 2

1. How can the open movement help the Environment and Just Transition movements?
    - Joint campaigns to open up data and other research outputs
    - Working with the people that are impacted! Communicate with citizen science groups to be more impactful -- overarching theme for all the 4 questions
        - It also depends on the national environment; enabling a policy environment that supports community + citizen science
        - How to collect quality data and make it available through CARE + FAIR principles, good data management skills
2. What are some strategies to get governmental agencies to accept community and citizen data?
    - Contact with local advocates; more from the bottom-up strategies? I.e., more local govts. (municipalities, sublocal agencies), that can't follow with the big national/federal standard
    - Build trust in citizen science data; trainings to follow established data standards
3. What could be done to make environmental data more open & accessible? (i.e., from a policy, regulatory, community, technical, etc. perspective)
    - Open policies adopted and implemented at the national/funder/institutional levels
    - Incorporate some of these problems into the agenda of env. organizations as part of their advocacy efforts -- maybe specific campaigns?; follow other laws (i.e. Escazú)
    - Support citizen/community science projects with good research data management (e.g. via libraries, e.g. Citizen Science for Research Libraries — A Guide
        - Great idea! Citizen task force -- it's inside LIBER: https://libereurope.eu/
        - Provide training
4. How do we best communicate synthesized data from open and governmental sources to communities impacted by pollution?
    - Establishing relationships with local advocates
    - Visualizations + infographics are always a good way, maybe also videos? Oral stories? Radio shows?
    - Follow more accessibility standards, particularly for some communities that have been constantly excluded it's important to make sure they understand the information that's being communicated to them
    - Coverage in local media outlets
    - Collects data in individual projects, people don't know those resources exist, the communication aspects, having ways to pick up by local media, local advocates
        - Best way people are finding that data/most effective?
            - Idk! A lot of the advice is to get picked up more locally is to find local advocates, work with, partner with, appearing with local advocates, get more reach by partnering with them

        - Develop trackers of different power structures -- combined systems; a wiki system; collect information on general background; history of projects, sizes, they work more on a global / national level; so getting local is much more of a challenge
- More Wikipedia?!

GROUP 3

1. How can the open movement help the Environment and Just Transition movements?
KB: Open as a means to transparency and accountability - what is there to know, how do we know it, and therefor what can be done about it
KB: The open movement has a history and experience with collaboration that could serve other movements well, especially digital collaboration and interoperability
MB : rely on local dynamics, ressources (fablabs, education, non-profit)
co-produce data, to address local problems (water quality, air, soil, identify biodiversity)
We also see WaterBlitz, Bioblitz events , Local Biodiversity Atlas (ABC in French) which are helpful to collect local data and to give meaning to the evolution of our natural environments.

MT: practices of advocating for opening up data (and other assets), networks of lawyers who know how to speak to institutional power (law, policy, contracts…), working open as a way to achieve great power for civil society / social justice work. Honest conversations across these movements about the barriers for working together already. And uplifting case studies of successful collaborations.

SK: Now many scientific journals have removed paid access to articles about covid-19. It would be nice to have a campaign to remove paywalls for climate articles from scientific databases.

2. What are some strategies to get governmental agencies to accept community and citizen data?
KB: Set standards and examples of how data can be verified. This is a standard much higher than the one for “official” data or research, but will be necessary to show reliability as proxy reliability like org association may be limited.
KB: Can data and causes be separate? When any org with a cause also supplies the data, it is easier to discount it.
MB → work with them and between, document and use standards and protocols (FAIR DATA), in France we used low tech air quality sensors right next to scientific equipment and obtained the same trends. To reassure public institutions, and trust in data (https://maps.sensor.community/#2/0.0/0.0)

3. What could be done to make environmental data more open & accessible? (i.e., from a policy, regulatory, community, technical, etc. perspective)

KB: Start by just publishing. Have it out there. See the Safecast example of millions of radiation data points available.

MT: permissible licenses, structured data (not having things live in PDFs), clear governance and maintenance strategies around the data, point-people within the agencies to discuss use/collaboration/contributions to the data, interoperability (technically and politically)

MB: need to design formats and methods to transform this raw data into useful information for action. develop education (design, data visualization) and trust about data and the situations we are challenging.

4. How do we best communicate synthesized data from open and governmental sources to communities impacted by pollution?

MT: annotating data with lived experiences and otherwise telling stories that complement the data with knowledge/dreams/needs of the community

KB: Rather than synthesized I'd say contextualised. Show the status, but also explain what that means in practical terms and impact on human lives (today and in the future).

MB : local information and context, rely on ecosystems

Notes from Matt's presentation:

- Senior policy director of Healthy Gulf (Louisiana, US)
- Ground zero for climate based issues in the US, deal with environmental justice issues due to systemic racism and other reasons
- Environmental advocacy org for the Gulf states – FL, AL, MS, LA, TX
- Founded 1994 as traditional environmental advocacy org – protecting water, wetlands, endangered species
- Focusing on a just transition away from fossil fuels, climate adaptation and climate justice
- Every issue we experience is an EJ one as well given the history of Gulf South in the US
- Gulf of MX drains over 50% of continental US, borders lots of countries, at the end of "the pipe" (Mississippi River), lots of oil and gas drilling, spills, highlighted by the BP disaster and the Taylor Leak – still ongoing, but probably the longest ongoing oil leak in the US ever (15 years before someone stepped up to clean it up)
- Through organizations that use open data – Skytruth that uses satellite data, monitor different environmental impacts through the world – holding Taylor accountable
- Lawsuit finally settled, more money towards cleaning it up (Taylor fought this for 7-8 years)
- Talking today about how we on the frontlines of environmental movement of US – data that is important (and data that is accessible is important).
- Without information and data, hard to get things cleaned up

- Use aerial imagery, satellite, overflights, etc (partner with Southwings, take activists, decision makers, etc up to see things firsthand)
- Lots of organizations involved in the Gulf South!
- Few examples that are conversation starters on how we use data in some of the issues we run into when data hasn't been as open as we like
- Coal export terminal on MS River about 30 miles from G of M
- Overflights after BP disaster saw spillage into the MS River
- Ongoing for a long time, first thing was to file suit against them – in US can file a citizen suit, had a lot of trouble getting those images
- Trying to get imagery from Google is hard, ended up getting a couple images after several months of trying
- Took canoe out to get samples, flew a kite and balloon over the MS River (thanks to tech from Public Lab)
- Carole Excell (WRI) from chat: https://www.wri.org/research/implementing-open-data-strategies-climate-action-suggestions-and-lessons-learned
- Came to a settlement with them – part of the settlement was to give money to some organizations nearby, but it was a rough start because noticed the problem with Google Earth, had to collect a lot of own data and wasn't in an accessible format.
- EPA Clean Water Act – delegated responsibility to each of the states in the federalist system US has, lots of leeway in laws.
- Run into dismissal of publicly gathered data. Orgs do data collection on water collection, very often not accepted by the states, even if good QA is used, even if ones based on EPA guidelines aren't accepted.
- Take them as advisement, ID'ing water pollution issues, but citizen groups are often not incorporated into state data because it's citizen data
- Graded on A-F scale based on data collected how they allow public participation
- Volunteer monitoring, Gulf states didn't do well, FL doesn't even accept data if gathered at EPA standard, method to avoid admitting to pollution problems.
- Environmental racism in dealth alley, Louisiana
- Get visualized on map or graphic, can be more impactful – bring more people into movement
- Way to move public policy as well, if you can visualize, someone in state leg or congress can start understanding these things. Keep climate justice moving forward
- One of favorite visualizations came from forensic architecture (forensic-architecture.org)
- https://www.nytimes.com/video/us/100000007778616/louisiana-cancer-alley-cemetery-african-americans-video.html
- In cancer alley – all different kinds of pollution – particulates to radio activity, predominately African American, bottom of MS
- Put in a fluvial model to show where pollution was going, this should be the future of whenever we're looking at environmental impacts – shows where pollution is going and shows how it changes
- Flare at petrochemical facility, by the time one of the environmental agencies comes out, winds have shifted, don't detect pollution – repiratory issues, cancer causing

- Visualization is so important and shows the different impacts in real time, shows how everyone in this area is impacted.
- How can the open mvvmt help the just transitio mvmt – what are strategies that get gov't agencies to accept citizen data
- What could be done to make enviro data more open and accessible – community, public policy, etc.
- How do we best communicate and synthesize data to communities impacted by pollution – what resources does the open community have to help communicate visually (in Gulf South and elsewhere)
- Karien: interested in journey – instead of fighting for data that exists, why citizen data?
- Matt: UBT coal, easier which is depressing to get planes to fly over
- Data can also be shrugged off – coal plants dumping coal into river, starts getting more and more expensive – coal from this particular pile of coal, IDing that specific coal given that they get pet coke and coal from everywhere
- Corresponding data – having one dataset is one thing, but something that exists along base dataset
- Did use Google Earth in communications, little able to use – still is a good tool if you want to show time steps in comms with public officials, shows the breakdown of when you all of a sudden can't use data everyone knows is there.
- Jonathan Portiz: I wonder also about the *quality* of the data? If all sources were accepted, to allow citizen scientists to monitor corporate polution, wouldn't that also allow corporations to spam the open data with questionable data? A related problem: suppose the petrochemical industry paid Google to filter Google Earth images in certain ways?
- Matt: Petrochemical industry – could they pay google to scrub? Yeah. Run into privately owned data, privately or selectively produced data. Not necessarily anything stopping that from happening. Legal issue? At this point for all of Google's business of farming personal data for profit, they still have some good people working for them in mapping dept's.
- First question on quality of data – alot of orgs that are like citizen river watch, they use protocols
- For instance: https://www.epa.gov/citizen-science/quality-assurance-handbook-and-guidance-documents-citizen-science-projects
- Ivan Z: Climate activism gives new urgency to open access and stresses new needs to visualize communication. From your experience what can be improved and how can we do it?
- Policy to put together when we aim to improve regime of gov't – press Google, scientific publishers, NASA, etc so they grant full access to all the areas?
- Matt: A lot of data out there. In the State's Dept of Ag, aerial surveys, different states do these surveys, all of that data is theoretically public data.
- If gathered by federal agency – public domain – accessing it can be very difficult. Navigating that, special kind of protocol.
- One place where open movement and programmers can assist in some of this.

- US Corp of Engineers – wetland permitting – put out public notices, thinking about giving permit to someone in wetlands, developed scraper to get permits, put in spreadsheet, that was useful and then the Corp of Engineers went and changed websites and scraper wasn't working anymore.
- Code was messy
- Biden – EO to make data accessible, has done some – EPA has good tools for mapping and EJ, pushing them to take the platform they already have, incorporate x data, which certainly can happen
- Legislative side of things – keep it that way, have to do something legislatively
- Carole: Does Justice40 offer new opportunities here on climate and pollution data ?
- Phil: NASA hosts some workshops on this open science topic that may be relevant: https://earthdata.nasa.gov/esds/open-science/oss-for-eso-workshops
- Shannon, opportunities from OEDP:
    - Beyond Compliance network: https://www.openenvironmentaldata.org/pilots-categories/beyond-compliance-network
    - Environmental data as a public good: https://www.openenvironmentaldata.org/work/fall-2021-opportunity-brief-environmental-data-as-a-public-good
- Ivan: Access to information, list of demands, etc.

September 28, 2021: 10am ET (find your time)

Call #06: Open Climate season one wrap up!

Agenda

- **Welcome and housekeeping** *(Shannon, 3min)*
    - Housekeeping:
        - We'll be recording the call, transcribing it, and sharing on Appropedia.
        - You can follow the agenda and take notes in this GDoc.
        - You can also use the Zoom chat for comments and technical difficulties.
        - Please mute if you are not speaking.
        - Acknowledging that we're still in a pandemic and amid compounding crises. Everyone is experiencing this differently. Let's be kind and caring!
    - Why these calls?
        - We want to better understand how the open movement can respond meaningfully to the climate crisis.
        - From March-September 2021, we hosted a pilot series of "OpenClimate" community calls to explore this question and meet others asking similar things.

        - You can read more about past calls on our wiki and what we're learning in *Open Climate Now!*
    - Today's call: wrapping up season 1!

Introductions. Silently write and a few people can share outloud (please leave your email if you'd like information on other calls in this series). *(5min)*

- Daniel Mietchen, volunteer at Wikimedians for Sustainable Development, Research Ideas and Outcomes, Scientists for Future, Climate Reality and researcher at Ronin Institute, Leibniz-IGB and Fraunhofer-IBMT
- Michelle Cheripka, Open Environmental Data Project
- Charlie Schweik, Professor, University of Massachusetts Amherst. Research and practice around commons-based peer production
- Tobias Augspurger, OpenSustain.tech
- Alex Stinson, Wikimedia Foundation -- #WikiForHumanRights, Wikimedians for Sustainable Development
- Michelle Thorne, Mozilla and the Green Web Fdn.
- Shannon Dosemagen, Open Environmental data Project
- Camille Francoise (GLAM Manager - CC)

A recap of Open Climate's last year *(Shannon w/ OpenClimate organizers 20min)*

The meta-question is: how does open data work for decision making? Are there gaps related to the climate crisis? How can the open Internet dismantle the structures that delay climate action? We were able to reach out to different people and organizations interested in these topics. The community continues to grow, as we have noticed. Over the five calls we had over 100 people, many came because the topic was interesting for them. Topics ranged from grassroots organization to open source.

- From chat: One way to explore to get there would be to Campaign for Copyright to be paused/ shortened/ abandoned in emergency situations like the Climate Emergency.

LF: The ecological paradigm—we have been historically working with the domain of nature and culture as two separate things. We do the same when we separate the technological and the social in the open movement. We're moving in a frictionless way towards open source for science, this has been doing well in terms of the communities and production. We have managed to get funders on our side that give incentives for sharing. However, we are having problems with working with multidisciplinary teams.

Michelle: companies are consolidating from raw minerals to production, to serving up data… this consolidation is crazy. The other way I like to frame this idea is a fossil-free and open internet. We need things like openness at the heart of what we're building, and to give people the ability to participate in their own turns. Beyond a nerdy call we need to link to true environmental issues. The best way to respond to grief is action. The climate crisis is not a single issue, it is an era that we're living in now.

Alex: OSM, Wikimedia, the spaces where languages are supported. The question is how to reach these communities? One way is to reach out in their own languages, and get organizers in contexts around those languages. New leaders from not the dominant part of the Internet is important. We must listen carefully, find the gaps for participation, and then create the spaces.

Small group discussion. First silently write in the GDoc and then discuss *(small groups, 10min)*

GROUP 1

What resonated with you from the past conversations (or this conversation)?

- Camille: It is hard to know how the policy level around open knowledge will create specific impact and to identify professionals and institutions. We do not have an IP Framework to preserve heritage equally all over the world. Global north countries have developed preservation exceptions and those are inexistent in many global south countries (e.g: if something happens in countries which have inaccurate or inexistent copyright exceptions, it means that many cultural heritage institutions are not allowed by laws to digitize their collections)
- Charlie: all-hands-on-deck is the right vision. Open will create action faster than proprietary. Michelle C: What she really values from the call: articulating the website based on the grid, disconnect with the way we use the internet and the material elements of using the internet

What would you like to see in Season 2?

- Charlie Schweik: Design global, manufacture local. How to do big things like CO2 vacuums to build similar devices. How to scale from new localities. Would love to start discussions about design global, manufacture local efforts; science showing openness moves us faster to solutions than proprietary; CBPP in sharing public policy innovations (I have an example of a wiki my students have done)
- Explicit connection with solidarity building, organizing groups that are doing the work? Take into account how what is affecting MOPA people

What role would you be interested in playing in Open Climate?

- Charlie Schweik: I'd be happy to organize a call or to present
- Michelle: OEDP Happy to do work on marketing, making sure that more people join in on the calls.

GROUP 2

What resonated with you from the past conversations (or this conversation)?

- The topic of climate & openness are related to each other -- there are many things that people are saying that are correct; there's a lot of openness in a lot of areas, but in climate there's still not a lot of awareness about openness. With the website he created he can measure -- there's actually very small groups, like technology sectors from different areas, in terms of climate risk, different areas, but not many people are looking at the whole picture. And also how the cooperation between different communities can work. And how can these novel approaches be more visible, everyone is reinventing their own wheel! There are areas where no open science or open source is being created, for example, in the area of sustainable investment. There's a lot of potential to fight greenwashing with openness -- there's so much greenwashing going around and there's a lot of confusion
- No tools or few tools to measure the sustainability of companies in a transparent way, this is what he actually wants to see

- The topic and some of the people -- he doesn't know how to integrate, Open Climate to interact more with other open & climate communities

What would you like to see in Season 2?

- Pushing for IPCC reports and related materials to be put under open licenses, so as to allow for this expert content to spread more easily.+1 — although are the licenses really barriers for people accessing and using these reports?
    - The non-open licensing inhibits reuse in places like Wikipedia, which presents the information in more accessible ways, in more contexts and more languages.
    - What do we think the barriers are to using open licenses?
        - Most of the people involved in drafting the reports have a very limited understanding of open licensing.
        - The priority in terms of the function of the reports is to serve as a foundation for evidence-based policy. Other potential uses (e.g. educating people about the issues covered in the report) are secondary.
- Joint action, e.g. doathons
- More conversations with climate activists, environmental groups, and frontline communities
- More about how we can fight greenwashing with open and transparent data and software

What role would you be interested in playing in Open Climate?

- Party co-host for an Open Climate Festival 😁 (michelle t) +1
- Happy to be involved! Happy to learn more on how this could be facilitated in the future
- I would like to create a workshop about the role of open source in ESG Investment (Tobias Augspurger) thank you :)

Shareback *(all, 10min)*

Where from here *(Scann, 5min)*

August 31, 2021: 10am ET (find your time)

Call #05: How can we achieve a fossil-free internet by 2030? How can the Open internet dismantle the power structures that delay climate action?

- Presenter: Chris Adams, The Green Web Foundation.
- Facilitator: Michelle Thorne, Mozilla and Branch Magazine.

Agenda

- **Welcome and housekeeping** *(Michelle, 3min)*
    - Housekeeping:
        - We'll be recording the call, transcribing it, and sharing on Appropedia.
        - You can follow the agenda and take notes in this GDoc.

        - You can also use the Zoom chat for comments and technical difficulties.
        - Please mute if you are not speaking.
        - Acknowledging that we're still in a pandemic and amid compounding crises. Everyone is experiencing this differently. Let's be kind and caring!
    - Why these calls?
        - We want to better understand how the open movement can respond meaningfully to the climate crisis.
        - From March-September 2021, we're hosting a pilot series of "OpenClimate" community calls to explore this question and meet others asking similar things.
        - You can read more about past calls on our wiki and what we're learning in *Open Climate Now!*
    - Today''s call: A Fossil-Free Internet by 2030

Introductions. (28 people) Silently write and a few people can share outloud (please leave your email if you'd like information on others calls in this series). *(5min)*

- [name, email, what brings you to this call?]
- Matt Rota:
- Nicole Robbins, founding member of Red Hat's Climate Change community of practice. Joining to learn what is going on with climate-related problem-solving in the open source community.
- Diego Pino, OSS / Open Data (Frictionless Data) Software Developer working for Cultural Heritage at Metro.org
- Karien Bezuidenhout, funder of open and pro-climate initiatives, always interested in knowing what can/should be done NOW
- Greg Bloom,
- Max Mahmoud Wardeh, OSS / Open data / open education. I build software, mainly related to digital archives and education. I teach digital technologies at Loughborough University in London UK, develop OERs and am interested in the application of research into the development of open data and software. Co-building lessimpact.org
- Sarah Hutton, University of Massachusetts Amherst, an R1 Research University that focuses a great deal on climate and sustainability research; personally a librarian/researcher in open (everything - ed, science, data). Interested in getting community members involved in open data collection, analysis and application in climate research.
- Melissa Hsiung, ClimateAction.tech co-organizer & Sustainability Management MS student at Columbia, interested in learning more about OpenClimate + fan of Michelle & Chris :)
- Michelle Cheripka, climate community + learning how to create systemic change around the internet
- Slammer, email: Interested in building a rubric for how to measure environmental impact of products we develop as programmers or services we deploy at our organizations

- Chris Laprun, member of Red Hat's Climate Change community of practice, trying to learn more about the topic of sustainable internet, and more generally about moving the needle towards a more sustainable world
- Emmanuel Kellner, Info. Science PhD student at University of Geneva interested in use of citizen-science and generally open datasets for decision-making, especially by governments for pol. action.
- Iryna Kuchma, EIFL Open Access Programme, discuss how open science could contribute to solving climate change issues, with a specific focus on the Global South
- Jen Liu, Information Science PhD student, I study the impact of climate change on networked infrastructures and interested to learn how others are thinking about this topic
- Jim Craig,a member of Red Hat's Climate Change community of practice, background in CSR and sustainability for the last 15 years or so.
- Lea Zagorin, member of Red Hat's Climate Change Community of Practice, combating climate change is something I care about deeply and I'm interested to learn more about how tech can be part of potential solutions
- [Douglas Ssebaggala, I need to know the linkage between climate action and the Wikimedians for sustainable development]
- Allen Gunner/gunner, looking to see how I might contribute
- [name, email, what brings you to this call?]
- Matt Rota, Healthy Gulf)
- (Madeleine Charney)-- potentially talk about unions

Setting the scene: A fossil-free internet by 2030 -- and how openness can help *(Chris, 7min)*

- Chris is one of the director of the Green Web Foundatino (achiving a fossil-free Internet)
    - Speed the Internet free fossil fuel transition
    - One of the editors of Branch Magazine
- A fossil free internet
- The internet is the world's largest coal-powered machine.
- GOLD = internalize these ideas
- Open as a lever against delay
- It's not a matter of whether this happens but a matter of when this happens, we need to speed this up.
- Rapid, far reaching, unprecedented terms, that's their version of acting about this
- There are two ways that you can act on this:
    - engage as professionals (embedding these values in how we work) and
    - engage as members of society (show up for those who are doing the work)
- GOLD = (engaging as professionals)
    - Green = green energy, there's climate pollution by running computers, but because computers … there's no control over the energy mix that goes into that, but at least you can make it accountable. You can't run a website on solar power only, (..) you can shift things across. We've been tracking which websites run on reneweables / which ones don't, and they release these datasets as open data,

and an example of this is websitecarbon.com, their increase their reach by using open as a lever
    - Open = not just open source, because transparency in open data is as important, the env. Impact of where you might be using the technology, using services use a lot of energy, then you can choose where in the world you can use the greenest energy
    - Lean = optimising the way you work for less emissions, extended lifespans for latptops, etc.
        - There is a carbon footprint from energy but also from making things. A solution for this are open source laptops
    - Distributed = choosing to run to move through time & space to lower your carbon footprint
        - Finding the right time to bake a cake, to reduce the carbon footprint.
        - Branch is one good example of how we do this (with background colors)
- Engage as members of society:
    - Predatory delay by the fossil fuel industry
    - The FFF is asking for action, making the case for a shift in discourse (including legal course)
- Website Carbon: open data fuels tools that help people look up how a website is powered
- Electricity Map: uses open data from around the world to understand the energy mix
- A great win was to force Germany to reduce the carbon-free economy by five years to 2045.
- Legally asking to change the course -- fossil free by 2045.
- This is part of winning these arguments to protect the lives of children and persons.
- It is important to find tactical wins--see where some wins can be replicated.
    - Climate-laws.org
    - "Speed is justice"
- We envision an internet that is sustainable and just.
- The internet should be a global public resource: one that is fossil-free, open and accessible to all, and in service to the diverse needs of people everywhere.

Small group discussion. First silently write in the GDoc and then discuss *(small groups, 15min)*

GROUP 1

- Where could openness be used to change the status quo of a fossil-fueled internet?
    -
- What open practices and assets already exist that could help transition the internet to renewables? What actions speak to you personally?
    - One tiny: example. Less Automated testing of Code during development.
- Who else is doing relevant work, and who else should be in these conversations?

    - Europe: The Green Public Procurement (GPP) initiative, that includes the plan for energy consumption and environmental impact of technologies https://ec.europa.eu/environment/gpp/index_en.htm, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en
- Any other reflections, questions or ideas sparked from this conversation?
    - The questions are also very open! A larger question: anyone has a definition of what the Internet is and how to make the Internet being fossil free? Are we talking about the community Internet? The Internet based on big companies? Social media? The deep-dark Internet bitcoin mining? Large, diverse definition of Internet
    - Really fascinated by what Chris was talking about Branch, structuring their website for different energy, this is something tangible we can do around the Internet, how that would work in a more systemic level. If the companies are using the most fossil fuels, GAFA, how it might be possible to get companies like that where is contradictory to their profit interest, but where we can encourage them to make those changes?
    - Idk how to personally change corporate structures, but has been involved in campaigns for asking them changes -- is all about making them feel guilty about what they're doing, it's good for the bottom line, having a groundswell of people demanding them, Google might be the low-hanging fruit because they like to think of themselves as progressive, cutting edge type of thing, and this is what this is
    - How to actually encourage them to -- a food analogy: is like either partner, big bodega, it's actually different from the bodega that actually wastes a lot, reviewing the open climate data, it's a button about -- is not being political, climate is actually a big political crises, one way of encouraging this, is to make this very unprofitable, or very profitable to go green, to shift their policies to make greener a cheaper option. Google might be a good partner for this?
    - Internet provides a2k, access to information, open for equality, is a value proposition, what is the value that is provided by the use of fossil? Can this be measured? A big website that provides a marketplace (like Amazon) vs. Wikidata or Wikipedia, that do provide a lot of value, this is not valuable for anyone else, smaller communities, Amazon might be valuable in NYC but then it's terrible for everyone else, but what about the local website that provides relevant info for the community?
    - Is easy to create change / value in small organizations, but their impact will still be minimal
    - Is important to not only env. Organizations, but also other orgs. That are willing to support this as a proof of concept. Orgs. that are involved with this and could help with making this noticeable -- and this is very visible and cool
    - Maybe for the small communities with small websites is a question of going to talk with Wordpress?

    - Machine testing-up to test up your code, when they can test their code, that happens with Wordpress / Drupal as communities, small agencies that they are trying to make their money & business. Political commercial issue.

GROUP 2

- Where could openness be used to change the status quo of a fossil-fueled internet?
    - Documenting Internet standards for sustainability and (W3C, IETF)
    - Open projects with a demonstrable impact can give people a sense of agency in tackling the climate emergency
    - Create general standards depending on the activities done online (content creation, web development, data archiving, ecommerce)
- What open practices and assets already exist that could help transition the internet to renewables? What actions speak to you personally?
    - Open source platforms and projects (e.g. https://opensustain.tech/)
    - Developing more frugal sites (https://motherfuckingwebsite.com/)
    - Sustainable UX: https://sustainableux.com/
- Who else is doing relevant work, and who else should be in these conversations?
    - Academic researchers: there's a lot of research and open data sets being published. The open movement can be instrumental in finding ways of translating the research outcomes and data into actionable projects
    - Low-scale practitioners, indigenous communities, small producers
    - Internet governance organizations (IETF, W3C, ISOC, IAB)
    - Cryptocurrency developers and advocators
- Any other reflections, questions or ideas sparked from this conversation?
    - People are needing prompts on what to do and how to join the movement!
    - Data is out there but needs to be actionable
    - Ideas around degrowth and the right to repair movement should be incorporated into this conversation. Less production and consumption of devices and bandwidth has to go hand-in-hand with the transition to using renewable energy for powering the internet and personal devices

GROUP 3

- Where could openness be used to change the status quo of a fossil-fueled internet?
    - Openness creates transparency, and a common set of standards to compare those leading and those trailing.
    - Creates awareness in the minds of Internet users
    - Rate websites against each other, maybe include a notional carbon tax, so the "real" cost of this transaction is x metric tonnes, which = x USD/€/¥/£ etc.
    - Create momentum by showing combined emissions reductions
    - Create pressure by showing how many sites/companies have taken action
    - Sharing of ideas can lead to faster arrival at feasible solutions (as well as faster failing of non-feasible ideas)

    - Creates a positive competitiveness
- What open practices and assets already exist that could help transition the internet to renewables? What actions speak to you personally?
    - Some great examples shared by Chris to really make this stuff transparent
    - Chris shared an example of a websites that rates the carbon intensity of web pages. - https://www.websitecarbon.com/
    - Climate Impact by area, if you are getting energy from one of the orange/red areas on the map, chances are your web pages are pretty carbon heavy.
    - Baking forecast website, to determine when is the optimum time to run jobs
    - Gain a better understanding of what incentives are in place for current tech companies to adopt more climate-friendly business practices, concept of “for profit, for good”
    - (It's easier to think of the work that private companies are doing, like Google)
- Who else is doing relevant work, and who else should be in these conversations?
    - OS-Climate is an existing effort, but I don’t know much about it yet
    - Schneider Electric (for data centres)
    - IBM with work towards net zero
    - Data centre operators / facilities management companies
    - Maybe REBA (to share the renewable energy market trends)? https://rebuyers.org/
    - Refurb and reuse companies and NGO’s
- Any other reflections, questions or ideas sparked from this conversation?
    - Open efforts need more/better PR so that efforts and solutions are better known, shared, adopted
    - How do we grow and accelerate this movement?
    - How do we get some of the tools Chris shared more widely adopted?
    -
    -

GROUP 4 - Gunner, Karien Bezuidenhout, Sarah Hutton, Chris Laprun

- Where could openness be used to change the status quo of a fossil-fueled internet?
    - Need a standard to measure power consumption of CPUs, right now this information is quite hidden
    - Transparency and reporting on the fossil-fuel status of those who inhabit the internet
    - A sense of progress - if someone is not there yet, how far have they come, where (and when) are they going
    - Comparable and measurable standards
    - Clear and easily accessible alternatives
    - Would be interesting to explore the role open hardware could play in self-reporting consumption and carbon production
    - Difficulty to act upon something we cannot easily measure, in particular when using cloud services

    - A focus on who is ‘allowed’ to contribute to knowledge creation and research - cracking open the model to invite in the wisdom of indigenous community knowledge regarding climate research
    -
- What open practices and assets already exist that could help transition the internet to renewables? What actions speak to you personally?
    - There are many pre-existing carbon calculators out there that allow for personal consumer choice to calculate carbon footprint/impact - though, how to we bring those disparate voices together to push back on corporations to push for policy change?
    - Simple is key. I am no longer convinced by carbon footprint calculators. What else is good enough? Are there other proxy measures?
- Who else is doing relevant work, and who else should be in these conversations?
    - Science and sustainability librarians.
- Any other reflections, questions or ideas sparked from this conversation?
    - In exploring these questions, IMO it’s important to distinguish open as a set of values from open as a set of practices. There is deep inter-relation between the two, but efforts that over-focus on practice and skip past communicating the values will scale less effectively and make less of a difference.
    - Are there trade offs between making good energy decisions vs making good security decisions for example - where you host, etc.
    - What is preventing hosting services from switching? Large companies are slow, do not control infrastructure, etc. Black box of services

GROUP 5

- Where could openness be used to change the status quo of a fossil-fueled internet?
    - There was recently a #CleanCreatives campaign to blacklist extractive companies from the ad industry. There could be a similar campaign to change open source software licensing to forbid use by extractive companies. This was suggested by Luis Vila – @luis_in_brief
    - Open data can be used to understand who has access to internet (though the data here can be inaccurate at least in the US) to ensure that internet access can be expanded as we also transition to fossil free
- What open practices and assets already exist that could help transition the internet to renewables? What actions speak to you personally?
    - Who else is doing relevant work, and who else should be in these conversations?
    - Wikimedians for Sustainable development
    -
- Any other reflections, questions or ideas sparked from this conversation?
    -

Shareback *(all, 10min)*

- Whoops… forgot to take notes here, will add some of transcript in later.
- How needs to be in this conversation? Open for who?
- Diego: Making better practices on how we code things, building software for newer machines, did good things 10-20 years ago with less power
- People producing devices are giving us more power
- Software is brain of machines, this is a good start, change about openness
- Being open about practices and sharing practices with world
- Making changes in how to test code, hundreds of tiny computers spinning
- Chris: “this is about power, not energy”
- All these ideas are political, this is how we live; mention the idea of having a new, open source, but do you have community software, we’re building this for people, not for corporations, community is so important when it comes to env. / energy issues, licensing is also a very interesting, potential mechanism
- From Chat: Rachel Coldicutt worked on a good report here exploring these ideas: https://twitter.com/rachelcoldicutt/status/1303944978855596034
- Scann: Internet in more than hardware/machine/infrastructure sense-- open communities wikipedia movement-- differences there between open software and culture movement. Good that in a way to focus on practices around how we build things
- Reusing things that are open; this is something that we could do to reduce energy use; create & -- what we can continue to re-use and not re-build again
- When we talk about decarbonizing industry, it’s about power and not necessarily energy. Can have a closed, oppressive but yet “green” internet. Need to talk about open + recourse, with effective and functioning governance
- One thing I wish I had mentioned is that the work by groups here I find interesting - they’re being very deliberate, with how they use open as a lever - https://climatesubak.org/the-data-cooperative
-

Where from here? *(Michelle, 5min)*

- The subject is open to anyone who has a proposal
- We want to bring in people who have done community organizing, to discuss how the open movement can support them.

Next Open Climate call: September 28

June 29, 2021: 10am ET (find your time)

What are the challenges of translating the Open movement work into environmental research of the climate crisis?

Facilitator: Luis Felipe Murillo

Presenters: Myanna Lahsen, National Institute for Space Research, Brazil and Sílvio Carlos, Socioenvironmental Institute, Brazil

25 attendees

NOTES:

Opening

Shannon introduced herself as technical facilitator. She described how to access and use this etherpad. Anyone who wishes to join future meetings with this group can leave their name and contact information.

These calls are recorded and will be posted on Appropedia (https://www.appropedia.org/OpenClimate)

Luis Felipe introduced himself as host.

- Open Climate is a collective of people thinking and working to create spaces-- digital commons and climate research
- Today: promises and challenges of openness-- Myanna Lahsen, social scientist studying sustainability and Silvio Carlos

  https://myannalahsen.com/ and

  https://mirim.org/pt-br/institucional/quem_somos
- Question for both: developing tech to advance-- challenges of oppenness, broadly analyzed from different angles in the study of the climate crisis.

Myanna

- What are the challenges for oppenness
- Cultural anthro by training, focused on cultural process and climate change/sustainability
- one of the challenges-- the anti-politics, want the public to understand science as devoid of politics
- threatening to science-- but this is a dilemma
- understanding that there are concerns, want to point to how we do need oppenness about mainstream science
- risk limiting of science agenda, limitaiton of what we think of-- "global environmental change", we get planets, parched environments, some humans here and there
- Don't show the people creating these problems, but people as victims.
- Not understand that this really is a problem that is social at its heart, creates a bit of a problem
- How we think about whats relevant science- certain lines of research are marginalized, not included in mainstream science

- Even more marginalized-- social science of climate, not seen as relevant, can help create an oppenness to how science works

paper "The social heart of global environmental change"
https://doi.org/10.1038/nclimate2320 (paywalled)

- Overland and Sovacool (2020), climate change focused social science funding was 700% times less and mostly produced in the global north. Illustrates what the reality is-- have very little social science focused on environmetnal change
- W/ Esther Turnout-- mainstream science also has interest, the anti-politics framework doesn't permit talking about that-- have to cover this-- this perpetuates a science agenda which is not helping us get towards transformations.
- Not talking about the politics and social heart that are system critical-- how artifical intelligence factors in, etc.
- Need to look at mainstream science and understand the science itself
- Calibrate to get there, too easy when the science is left in a bubble-- most admirable scientists (like with IPCC)-- what matters is voices, intentions and thinking further than continuing predictions.
- Image from Brazil-- science without borders, investment to advance knowledge society-- all natural and technical areas. Not a single social science included-- what is needed to get society ahead is limiting and bracketing away the social science.
- All sorts of reasons, but it is also because decision makers are uncomfortable with social science because it brings politics out.
- Gov't wanted censorship control over social science, but not natural science.
- Idealized images of science produced-- means that when something like climategate happens (when publics see that science also contains political and is a social process, publics are more likely to distrust science in ways that serve anti-environmentalists; they are more likely to throw out whole baby (science) out with the bathwater. Instead, they need to understand that science is a social enterprise and it needs oversight, but it is nevertheless is very important and a particularly rigorous means of knowledge production; we need not end up in total relativism.. Publics need to understand what science is, to have that nuanced understanding.
- Publics need a way to calibrate what is presented as the truth.
- In US-- polarization of climate wars, but this leads to blind spots-- example of kind of science, STS will not look critically at mainstream
- Sociologists "this is how they contribute to climate change"-- how they produce, think and relationship to power
- Jasanoff-- liberals who have lost perspective (example of culture wars)
- Have seen something similar around coronavirus-- taboo, lab leak origin theory of virus-- a mis-recognition of multiple possible origins of covid-- hugely important for preventing pandemic in future. Idealization of science.

- Perpetuates itself-- one thing to say, in that culture war context-- assumption underpinning liberal side, optimal trust is full trust-- but in fact, a mixture of trust and distrust is more optimal; insufficient trust and excessive trust are both problems.
- Converge around what is proper and should be funded. Exclusive research at the exclusion of others.
    - article "Understanding and managing trust at the climate science–policy interface" https://doi.org/10.1038/s41558-017-0010-z
- How profoundly imoportant-- brings us to how social media works, Facebook, surveillance capitalism. Crew that we're not talking about-- there's a crew of how we think and understand problems. Inquiry into that is so off the map.
- Sustainability science-- U.S. National Academy of Sciences Sustainability Science workshop in late 2020. Integrated science, but designated commentators noted that the workshop participants and sessions forgot to talk about media, political economy. There is a danger that what we think of as relevant research is oveerly limited, giving us more of the same. There is a tendency to think that social change just happens and is something we somehow can't interfere in. Yet through facebook and Cambridge Analytica like organizations - through social media - how people think and feel and vote is being manipulated around the world, to huge effect for the environment and lives, human and animal.
- Science is part of making that black boxing-- certain defense-- massive science machinery, what do we do in that case-- people want to keep doing their science, how do we shift research agendas without it being too threatening
- Focus on AI-- need to think about how this is relevant to climate change. Who is "we"-- we have the tools to change how people udnerstand the problems of the world https://iopscience.iop.org/article/10.1088/1748-9326/abdcf0
- If we proactively thought about reshaping how people think-- who is to make these decisions and how-- kept from that, circling of the wagons around science perpetuated and sanctioned under IPCC, means we aren't asking and answering these questions enough.

Silvio Carlos

- Here as an individual, not as a representative of institution
- Meterology-- work as computer programmer and free software advocate
- Tech and politics research outside academy
- Working in the social environmental instiutte in Brazil-- ISA-- one of the biggest NGOs in the country
- Funded in 1994 to build a paradigm-- joining of the world social with environmetnal. Not just about conservancy, but also the ways society composes and iss composed by the environment.

- Advocacy, fieldwork and research especially with indigenous populations.
- For example, indigenous populations (until now) some success in protecting lands
- Conservations units and indigenous lands-- encyclopedia of indigenous people-- 100 indigenous people in Brazil + different linguistic families,
- pib.socioambiental.org/en
- indigenouslands.info/en
- Free software projects like webmapping tool: terrasindigenas.org.br/en and mapa.eco.br/v2/?lang=en
- Focusing on issues linking to climate change, amazon tipping point which might happen around 25% of biome losses
- Challenges of translating to environmetnal research of climate crisis-- not just about translating framework such as from the FOSS movement, but also those that are faced by FOSS movement
- Short list in hope that they catch attention-- timeframe dissonance
- Time to do research in order to come up with contemplative inquiries into theoretical solutions, but on other hand, urge of active science to solve things as fast as we can-- perpetual solutions that need to be reviewed.
- Urgency from threats to environment, mega machine that is -- short sighted-- non-actionable studies and opinions
- In the long run perhaps we have a chance-- as a consequence, threat of obselecence-- environmental threat in itself, challenge to view sustainable technologies
- Obsolescence-- not a postive, transformative-- for just and environmetnallly respectful form of life-- deepens threats of colonial mega-machine is posing to the world and people
- Technologies we use, political and social systems-- small example-- website that has more than 20 years, older than wikipedia perhaps, needs constant maintenance to keep base with current technology demands-- costly and drives us away from other popular research
- Kevin Noone (from chat): Reminds me a bit of Steven Covey's foru quadrants: 1) Important and urgent; 2) Important but not urgent; 3) Urgent but not important; 4) Unimportant, not urgent. He wrote that we need to resist moving stuff from quadrant 3 into quadrant 1, and spend more time in quadrant 2
- If FOSS was a solution againt proprietary word, corporations took control of important code bases-- harnessing crowdsources of many while keeping core business as industry secrets. Forced to follow ungrades in the line of mainstream trends
- Build systems with non-colonial mindsets, sometimes the less an idea fits.. plenty of ideas out there and blueprints in the graveyard of inventions-- could enjoy exploring those outskirts-- important to alternate work between short term projects and long terms (10+ timeframe)

- Why smaller organizations and teams of researchers can do the same? Many NGO's and putting financing-- duplicating work, hardly sharing information-- challenge trying to solve by setting a shared plan.
- Even if small institutions are learning how to build an effective networks-- still oriented in short term-- invest in shared tools and data, energy and systems that it takes time to build. Once systems are set-- save labor and lead to about layer of organization-- encoded labor.
- Software is not just something you run, you build and encode on it.
- Many organization are trying to guess what gov't is doing since so much data is spread-- information war against society, which are about effective changes in policy-- how to deal with issues of public data access like what is currently going on in Brazil.
- Some data is vanishing through things like mass migrations-- secrecy provisions, lack of funding-- plain censorship and so on.
- Have not only a challenge of processing and saving data, but also safeguarding-- last point-- talking about creating tools for research and data viz-- those things nowadays are harder-- creating narratives on top of this
- Summarize: Biggest challenge is to create narratives-- not just for dataset visualization, but big and small narratives. Not just one, but many. Not just operational narratives on dataset, but exestential narratives. Something that is not just objective science, but linked with social and environmental causes.
- Petra: But who creates these narratives, with open data sometimes narratives are created from out of context actors and this is quite dangerous no?

Discussion
- Luis Felipe: Digital commons and relation to climate research-- questions of free software, and more fundamental
- Emilio: Myanna: curious about your views on communication in science, something that is needed in social realm and in hard sciences-- how scientists communicate and share ideas and to Silvio: Role of open source software-- percieved obselence-- how to avoid things being obsolete when they are not?
- Myanna: CommSci is not the same as how scientists communicate-- how scientists communicate, how scientists think about climate comm-- Scientists tend to think that the problem is that publics don't understand the science, and if we communicate the predictions better, then they will understand. Public involved in helping us think-- communication comes afterwards-- it is generally assumed that what scientists produce by way of knowledge also is what the public needs, rather than udnerstanding that the public has their own ideas, words, and understandings of what should be researched or of what is needed more generally.
- Big challenge is what scientists think communication is

- Reality is constructed through communication-- constructivist through communication, sharing what people understand-- already infused with norms, etc. Important how this happens. Communication science-- Robert McChesney-- looks at political economy of mass comm systems. Media is also infused with interests. Who gets a voice is already an expression of power.
- Need for deep rethinking of who controls information and knowledge production systems. Hard to see how we get new narratives in there if there's such unequal access to mass communications
-
- Kevin Noone (chat): Climate scientists have a tendency to forget tht communication is a two-way process. It isn't the same as broadcasting. Luckily, the IPCC is slowly catching on to this.
- Petra: I'm curious to know what the speakers think about the tensions (or not) between the open science/open data and data sovereignty movements, I can give an example of some work we are developing at https://licci.eu/liccion/
- Ashley: @Silvio Thank you for the presentation. The maps you shared that showed deforestation and Indigenous Peoples lands in the contemporary context, are these created in collaboration with the communities? Or is this data that is just public that was used to create the content?
- Silvio: Something I usually do at work, one of three computer software programmers at ISA-- huge institution from Brazilian standards. New technologies arise everyday-- that's what we apply for to avoid obsolecence, need to be critical about what we're going to adopt-- learn this from indigenous population, they're very critical about what they're going to adopt (except for smart phone tech, but this is a point for another conversations). Adopt only things that work for them.
- We also invest in having backend database with solid technologies-- data viz changes very fast, solid layer-- very mistrustful of new things, front end layers that we perhaps sometimes-- contract people to do, every five years reboot interfaces, kind of a compromise-- choose which are mission critical systems that need to be rock solid and using well grounded technologies
- Market force, perhaps the FOSS and OH movements can come up with solutions-- not sure if its a matter of forking, so many lines of code-- currently very difficult to do.
Kevin: Myanna's point about AI and climate science is an important one. In addition to her article, check out Brian Christian's new book "The Alignment Problem".
Ashley: How many open source mapping land tenure efforts exist across the Amazon? I ask because I wonder if the USA open source mapping groups have been in conversation with South American open source mapping groups.(specifically on the Amazon)
- Petra: Tension-- in my experience, open data, software, but with open science and data-- indigenous data soverginty-- how to solve tension of making data as open as possible--

citizen science lab fund, observations of climate change impact, engage communities in process, a lot of them don't want to share this information-- ice thinning, could be infromation that comoany can use to know where they can start threatening biodiversity-- eco-surveillance, cliamte traps and open data that is available-- good its open, more people can be critical about it. Comment on this?
- Daniel: Re "tensions (or not) between the open science/open data and data sovereignty movements", I think that open science is not about sharing at all cost but about asking "who or what would benefit (or not) if we share (or not) a resource X" at every step in a research process and weighing these insights, valuing input from everyone involved.
- Myanna: There are issues that are certainly a concern-- who makes decisions when there's too much of a closed door, would like to see more critical attention focused on those aspects. Usually do it with such good intentions-- historically knowledge has been used against the people. Point is to say that we need to render those, need to study corporations, not make only the vulnerable visible in understanding how communities work. Also need to study up. Need to study scientists-- a kind of elite. Being done more now.
- Culture that we should study the "weak people", but we need to study the people in power. You can't turn it over to something like oppenness in the end-- but point nis very valid
- Climate scientists benefit from fear of knowledfge-- put into black box and only get what they think is important.
- Not adapting enough to what questions would be. Still think oppenness is important, but hear you.
-Silvio: Decision belongs to the traditional populations involved in the research [missed this as I was writing in chat]. Shouldn't have to open everything-- should protect selves from researchers. Can still work around open environment data, open knowledge and can also negotiate-- hard to know the results of what is going to happen.

Daniel Mietchen (chat): Re "tensions (or not) between the open science/open data and data sovereignty movements", I think that open science is not about sharing at all cost but about asking "who or what would benefit (or not) if we share (or not) a resource X" at every step in a research process and weighing these insights, valuing input from everyone involved.
Ashley MP (chat): Speaking from my personal perspective, Indigenous Data Sovereignity needs to be respected.
LF: it is important not to confuse the importance of creating a commons of / for digital tech and the crucial importance of data protection and data sovereignty
- it is really up to us to explain to folks who are not in our communities. this distinction

- Petra: Totally agree, Part of the commons is rules and regulations that the community decides upon, so a real commons might decide that parts of the data should be closed. And looking on the birght side, I realy like this initiative, I think it Will be part of the solution very soon: https://localcontexts.org/
- Daniel: The CARE Principles for Indigenous Data Governance https://doi.org/10.5334/dsj-2020-043/
- Petra: More Reading for thoughts on decolonizng data and commons: https://creativecommons.org/2019/01/30/jane-anderson/

May 25, 2021: 10am ET (find your time)

What content gap questions are the Open movement missing in relation to the Climate Crisis?

Facilitator: Evelin Heidel
Presenters: Lisa McNamara and Emma Baker, Climate and Development Knowledge Network; Alex Stinson, Wikimedia

Main questions:

- Where do we see knowledge gaps and audiences needing access to information?
- How is the global picture different from local geographies or in local languages?

Attending (please leave your email if you'd like information on others calls in this series) -- 17 people:

Notes:

- Relationship between open mvmt and climate crisis
- Summary of these calls on Medium
- Alex Stinson from Wikimedia, Senior Strategist
- Lisa and Emma from CDKN

CDKN:

- Key knowledge gaps, program implementation, working with developing countries
- Gaps that are emerging rather than content gaps
- Region and country, local level gaps, but lots of cross-over
- CDKN, going on for 10 years focused on knowledge brokering, Africa/Asia/LatAm
- Funded by Canadian and Dutch gov'ts
- Knowledge tailoring, work in 9 focal countries and match to needs/demands
- Focus on supporting peer learning, championing of leaders in global south
- For a number of years convened climate knowledge brokers group
- Aim was to approve access to climate information, projects emerged from this

- Group is being hosted by WeAdapt xxx (thanks)
- Working with sister program-- science program in region (Africa)
- Focusing on trying to directly support climate researchers to contribute to Wikipedia, face to face Africa event, had a editathon Wiki for climate and also produced a guide
- Scann translated to spanish :)
- Trained professional, climate community hadn't gotten to power of wiki tools for climate
- Blog for wiki for climate-- researcher from India, Sumana Banerjee
- Where we see key knowledge gaps-- not new, we know this, increasing climate researchers are calling for more people for place based knowledge. Integrate with top down knowledge being done. Top down integration needs to be done urgently and at scale.
- more people centered knowledge, it's messy but this bottom-up down integration needs to happen urgently and at scale
- CDKN already has a beautiful map o knowledge / needs :)
- Tailored in accessible formats to needs, climate risk, but info on local and district level risk is still very much needed. Tools to do this effectively, process heavy-- vulnerabilities and understanding. Whats working? Adaptation and mitigation best practices
- Appropedia is good platform for this
- Becoming more nuanced in how we understand the community-- ind. Knowledge systems, oral knowledge, deep need for information in communities
- As soon as we do something that's not in English it flies
- Climate 101, need for understanding the big picture-- how the negotiations work, what is my gov't doing to respond to climate change
- A huge upsurge in activity around the movement. Project called KE4CAP-- alot of learning and sharing
- Global resilience partnership-- get global actors together focusing on resilience to try and port climate information
- What does this mean for working in global south? How can the open mvmt serve interest of communities, ngos, etc.
- Finding a lot that format and process really matter
- Implications of 1.5 degree warming in Namibia-- what you can do/risks, in all regional and district level audiences. Simple thing, but having a lot of impact. More than expected.
- User driven, the more user driven something is…
- What does this mean-- from our vantage point, an enormous opportunity for the open mvmt to respond to this gap about more place based and relevant knowledge. Actionable.
- Real leverage point that we can respond to. Passionate to get climate activists/researchers n the south to work using platforms like wikipedia
- Wiki-- ability to work across languages, editathons-- in terms of place based knowledge it's an amazing opportunity
- Global level-- how can we make this work at a country level, how can the open mvmt support this.

- WRI study on climate action and open data at country level. Because of enhanced frame of Paris Agreement, might be a good time to engage at a country level with open data. Get systems sorted.
- For national initiatives to work, need to engage local expertise
- Barrier: Bias from north on knowledge
- Climate practitioners in the global south, though strides made, world is rapidly changing, but some things tricky to do in global south
- Grappling with skepticism of researchers in the global south making their work freely available. Mistrust of open.
- Here is the link to our paper: https://cdkn.org/resource/online-engagements-in-the-global-south/?loclang=en_gb
- There's an ocean resilience coalition as well https://www.oceanriskalliance.org/
- you can find the link to the Resilience Knowledge Coalition here: https://www.globalresiliencepartnership.org/event/resilience-knowledge-coalition-webinar/

Wikimedia
https://docs.google.com/presentation/d/11t3mXfP3xphRxzSAkAHp-mhx9jDGjl7AVAzVQoJjNHM/edit#slide=id.gdcad83746f_0_532

- Activist role-- open activist, what is the role of the open organization. Don't start from the place that Lisa and Emma do-- how do I work with people on the ground around open space
- Where does Wikipedia play a role
- also we've put the link to the guide that CDKN wrote about Wikipedia in the notes doc but in case someone is not there: https://cdkn.org/resource/guide-how-to-contribute-climate-change-information-to-wikipedia/?loclang=en_gb
- First place I start with, most persuasive place to start-- impact through activism on the platform
- Gender gap has been mobilizing, has brought a diversity of new projects into the movement
- Developed on the edges of the gender mvmt in the Wikipedia space-- where are the activists? How do they do this work? How do we grow open content
- Climate is powerful. Data analysis-- where sustainability is happening. Spike on english wikipedia and then a crash. Public was looking to wikipedia because people were out there doing
- COVID hid conversation
- Usually wikipedia is dominant source of paid views, but on climate topics, 60% of views are coming
- Many more pages than in other languages, improving english page hits more people
- Looking earlier at Paris Agreement articles across languages-- Persian/Farsi is third most popular
- Because there isn't a lot of other climate knowledge in Persian, those kinds of pages are really valuable

- CDKN event was the one to kick it off in 2019, seen a lot of subsequent-- organizers in Nigeria looking at climate articles, who is Vanessa Nakate
- Experimental call to action-- wiki for human rights, human dimension in the climate crisis. Worked as far as we can tell. Scaled up in a nice way--at least 300 articles, good example of where intersectional topics worked
- Concept of right to a healthy environment,
- Russian wiki up behind it
- Still learning, what is the best way to approach this-- working on fictional personas based on who we are reaching out to as organizers, editors who create content, describe who is showing up at events-- who is audiences for the doing part of this. More journalists and activists and NGOs who were able to convene people in the climate adjacent spaces
- Editor side-- youth activists, existing wikipedia, interesting mix haven't quite had outreach like this
- Gender gap-- much clearer audience-- other women who want to see women's biographies reflected in the world, much broader space
- More targeted areas-- challenge ID'ing high impact that isn't clearly science. Greta and Attenborough-- drive huge amounts of traffic. Won't necessarily be impactful articles, but that's not info that makes people change policies.
- National level articles-- climate change and children-- intended audience is much more impactful-- write something broad v something local and impactful, it's challenging the plan
- Not always transparent as to where people are looking for climate information. Wikipedia is not always best place to see this knowledge gap.

Conversation

- Climate + children article, translated into Spanish
- Q: Mistrust of open?
- A: Has by and large been an open attitude of sharing their work-- mainly dealing work with academic lit, but when we get into the data realm it becomes much more tricky and proprietary, it's a mixed bag.
- Issue is that there is often big climate research programs. Southern partners are like data laboratories and northern partners ae the leaders. Inequalities and power symmetries-- in this situation researchers from the south want to hold onto their data
- Recognized for their work and data. As long as there is that recognition-- not transactional, extractive and fly in and fly out. One needs to be mindful that open is not an apolitical space-- it does come with issues.
- Alex: Have also seen in larger wikipedia space-- create room for activists, don't feel as much ownership of topic space. Need experts for certain types of knowledge
- Other kinds of knowledge that you can bring in for others that are active learners, part of the trick is finding balance between expert content and tings
- Kate: Oceans! :) Interested in idea of wikipedia as a conceptual way to build confidence in an open way, creating data systems and getting value for contribution.

- How do you build trust in ocean cit sci partnerships. Work in Angola, worked with communities who weren't that confident in data-- your data are good, shouldn't be intimidated, ways you can clarify data, should be standing up against other countries…
- Curious about building these systems that show people they are recognized and valued, but data become more valuable in aggregate-- show whole coastline, not just block level. Need data of 17 states that don't get along…
- Need data collaborations, looking for models where people are getting recognized. How are we creating sense of value while letting data be interoperable, finable and reusable.
- http://datamares.ucsd.edu/
- Lisa: Wikipedia is an incredible opp to do collaboration-- in doing that collab and seeing an immediate result-- usually don't see immediate results on page. Working with scientists in that way-- yes concur and don't know how we take it to scale.
- Alex: Space of work is campaigns, editathon and turn it into something meaningful-- do MOOCs where we give librarians skills relevant to their professional practice while teaching them wikipedia-- we want to teach wikipedia, what are the needs librarians need and how do we use wikipedia to facilitate that. In process of funding a couple projects where we want to look at youth climate activists-- alot of them are doing communication of science, but may not have formal research training, know how to read scientific article on climate crisis, can you teach them those skills while teaching them to organize their communities to work in open space. Guess it's smilar for researchers.
- Wikipedia tends to try and solve things with editathon model-- but what are we offering audience.
- Value add of the data part, think about librarians-- digital modes of knowledge production
- Kate: https://www.openscapes.org/ teaches scientists to be more collaborative
- Max: Excited to look through CDKN in more detail, more about what you're offering-- definition of data poverty? Key things is really needed in this conversation is access to data and ability to have access to what data is published-- tech skills, computing power that are needed to do analysis of that data. That kind of data poverty is still lacking in open community. Wikidata has offered some of this-- ability to do queries and heavy lifting in terms of technical and physical infrastructure needed-- what are thoughts on that.
- Lisa: Don't have expertise to answer comprehensively-- sense from being exposed to open community and working with decision problems. Getting from the data to the action is a long and complicate chain. The technical expertise, to curate, manage and keep whole system going. Every national gov't wants a platform where they can put data in and out, but haven't cracked it.
- Curious-- webinars of the climate adaptation CE4CAP program-- collaboration of climate platforms-- European users.
- To get to decision level is complicated.
- Alex: Don't have an answer for this. From cultural heritage partnership work. Group of community in Ghana digitized things, but no repo to store it, but had to do an open software eval-- had to go across Accra to get the university library to host. Even when open solutions in a sector like libraries-- the expertise and capacity didn't live in one

institution. That level of complexity-- where talking to practitioners in global south-- true in open data- can't pick up one model and expect it to work elsewhere.
- What is in capacity and interest now-- endorse it. Philippines community, translation work-- google and the various other big providers, that has been super valuable to them on local language context and information-- just not available.
- Max: Work of Datakind in the UK and US. They do some work towards bridging knowledge gap in helping orgs work with data. How can it be applied in different areas. Big one of infrastructure-- sheer cost of resources that are needed.
- Kate: Open Data Institute-- lots of data literacy training. WEF + UN Decade for the Ocean-- translating some of their work into coastal and ocean resilience issues, translate into multiple languages.
- One reason we're looking at doing this with these groups-- global economic fund, etc. Saying "if you can tell me what Trinidad needs, we can fund it". Chicken and egg situation. Can we use things like working with ODI and Datakind-- data strategy and assessment, will cost us this much money. Public and private are in for that. Articulate as a shopping list.
- Scann: Careful when we talk about-- problem with gap of computing power, but also be caution around doing everything as if it were the same. Small countries that struggle + middle income countries, want to be cautionable-- don't put people in global south into the same bag around resources.
- https://www.os-climate.org/
- Some gov'ts are cautious when it comes to working with other governments, etc.
- Max: [Missed question]
- Alex: Hard to pivot towards work that Lisa and Emma are doing, have to recruit the right audience to write all of the climate stuff about Africa. Elizabeth M? And Alex experimenting with how you find topics that are at medium complexity, whats the thing between the biography and the main climate adaptation article that would be impactful.
- Tools for doing that are not there yet.
- Luis Felipe: brazil used to be one of the biggest contributors to climate / atmospheric science... until... we were all hit by a mad king from the dark middle ages!
- Lisa: Balance between high impact articles v those that are more durable.
- Alex: Nice thing about environmental topic is that they're globally acceptable to deal with. Maybe 5-10 years ago it wasn't the cse, but politically opposed mining situations in particular countries.
- For the most part-- amongst volunteers who are savvy, environmental issues are less. Well documented knowledge with particular gap on platforms.

April 27, 2021: 10am ET

How does open data work for decision-makers? Do they need more data (amount, sources)?

- How is using open data different in different contexts (kinds of work, geographies, etc)?
- Why are people going to other kinds of data? Are there other competing alternatives to open data? Are there practicality issues or tradeoffs with open data?
- What kinds of impact does open data create? How are end-users using it in the workflows?
- What challenges do you run into when talking with other people in your space about open data?

Presenters: Anna Grijalva (UNDP Accelerator Lab Ecuador); Angela Eaton (Open Environmental Data)

Facilitated by: Emilio Velis

Attending (please leave your email if you'd like information on others calls in this series)—20 attendees total:

- Anna Knörr (SSC ETH; - attended previous session, too :))
- Tobias Augspurger
- Max Mahmoud Wardeh
- Ryan Fobel
- Karien Bezuidenhout
- Julieta Arancio
- Bri Johns
- Jessica Leete

Notes:

- Emilio: how is data generated, for who..
- Series of calls for people using data in different ways, environmental areas, see how data plays a role in all of these.
- Simple structure for this call-- 10 minutes for each person to present
- Guiding questions if they are necessary
- Angela Eaton-- based in SF, knowledgeable of different subjects such as water equity and sustainability
- Anna Grijalva-- data for decision making.

Angela:

- Live or inspire to live in environmental with communities-- EJ, active participation of communities that
- What community held data and assets might look like, how it fits in the scientific method
- Community or publicly held data assets-- quantifying experience-- work with government, industry.
- Environmental data has different meanings to different people

- Community data projects-- participant scientists, increasing science norms, creating trust between gov't, communities, elevating learning through common languages
- Author of open data vs subject of closed data collection
- Community science-- in many forms and in traditional spaces
- Community participation may not look or be designed to look or act like academic research
- Need to understand community embedded knowledge-- seek science valuable to the community
- Living on land once stewarded by Ohlone
- Methods that can prevent wildfires that plaque CA-- native and non-indigenous students who did two days of controlled burns
- Promotes high trust since traditions build trust-- learn, incorporate and respect practice there are better routes between government
- Locked out of the empowerment of controlling services. Pseudo participation hurts the ability for trust to be born.
- Data from the same event-- gov't agency-- fires from Sept 9, 2020.
- Photo from 1pm in Mission District, social media documented as a doomsday. All of phone cameras are meant to brighten images by moving white balance
- In previous photo, photographer friend darkened photo-- but which image is more important, scientific and useful. It makes us question how data is collected.
- Data editing to reflect memory and experience. Constantly clarify what raw data means, what self-selection means, what subjective, transient and temporal experiences affect that data.
- Which image has higher community value and participation?
- Which image do you trust the most?

Anna Grijalva

- Accelerator labs at UNDP-- think and rethink ways of doing development differently
- Break idea of experts being ones with solutions to the problems
- Working alongside communities
- Different approach + compliments Angela
- Specific experience we had in terms of using this methodology-- share landing page that we have for this initiative
- Another set of webinars, further material, blogs and so on
- Based on this initiative-- applied methodology-- access and use data. Talk about deforestation
- Context-- why is it relevant to talk about deforestation in Amazon region-- work done in Ecuador
- Ecuador has a bit of the Amazon region, running research to ID through data sustainable cattle farms-- cattle raising and deforestation are related
- 99% due to ag practices, 64% transform in pastures
- Key to think of this as a data ecosystem-- who is the owner, who has access, what is the frequency in which it is collected. Do I have a partner in collecting data.

- Partnership with GIC datalab-- ones that are giving guidelines in terms of methodology. Worked with local GIC offices in Ecuador
- Framed in bigger project of UNDP-- other two ministries in Ecuador
- Most important partnership in the sense that we could conceptualize a research problem and have access to most of the relevant data for research.
- Quantitative and qualitative phase-- run model to ID sustainable forms based on data.
- Forms in terms of their peers-- a lower rate of deforestation each year. Also show to have efficient practice in terms of cattle raising
- Find local-based solutions based on what farmers are already doing in the field. Relevant for the context.
- Run in two countries in the Ecuador region-- research for 5 years from 2015-2020. Research as a whole took 1.5 years, but looked at 5 year period
- In terms of data sources-- soil coverage, cattle vaccination registers, cadastral data, etc.
- Good side of this is that it has a lower cost, downside is that given fact all sources of information-- one variable you need, doesn't exist in different sources of data. Geographical with databased.
- Cattle vaccination registers are owned by the ministry of agriculture
- Sattelite images-- both open source and non-opensource
- Didn't want to spend budget, can do a lot with this sort of information
- Data is a way that is meant to be reshared by the government-- give database access rather than PDF
- Deforestation--
- "Open meant for reuse by the public"
- When you have a rate between what you predicted-- find positive deviant, differentiated from other peers. See in an organized way how other forms of data will give us inputs into the model
- With satellite images-- created maps of cover and use of soil-- different poundage of soil type
- Cattle efficiency-- other relevant information taken from satellite images-- different points of data sources, understand location of-- once you have access-- way we used the data, created a positive deviance variable, know if farmer was above peers in terms of performance.
- Variable of 5 digits in terms of where farmer was with their peers. Some farmers-- constant positive deviants.
- Created variables that show if farmer was overperforming variables or not-- was a positive deviant or not.

General conversation notes:

- From Angela's talk-- gap that has to be bridged between experts and non-experts. What is view on if gap helps in bridging gap or is a detriment
- Angela: Outline that there is lots of types of information and knowledge, doesn't fit uniformly into columns and roles. In terms of equity and inclusion-- figure out how to capture knowledge that people want to offer to a data system. Make use of this for greater public good.

- Not necessarily data, but there is data that is collected by different types of monitoring devices-- density of data or as groups decide to do monitoring of a system-- hopefully an open data asset, the density as being the important part of it as well as the collection process
- Ana: To this point we are having long conversations to have validation of authorities to send out email to teams, share out what has been done-- at this point, sharing experience that always the momentum and importance on how you make impact on policymakers is key otherwise information won't necessarily be used.
- At national level can create a lot of tension if you don't interface with policymakers in a way that will be useful
- Anna K: Academia perspective a bit: Reinventing discovery, Nielsen-- physicists-- examples of how open data was uncommon in academia-- driven by need to publish and be cited. Examples of how opening this up can both support some scientific projects but also support links between science and society-- GalaxyZoo-- give people task of qualifying galaxies. Popped in mind when sid experts and non-experts.
- Personal perspective-- involved in sustainability here, whitepaper to make ETH carbon-neutral-- talked about how the two main factors in our strategy link-- need a database-- key places where we need to reduce emissions-- on one hand have data and then also have psychology and culture change. The two are linked by transparency. How do you get people to change their behavior?
- U of Edinborough-- flight emissions data is publicly available. See how much everyone is flying. Link Swiss universities to share data--okay to fly
- Scann: Passionaionate about deforestation-- interesting to see how we go from satellite data to local data.
- Ana: Macro-level data-- how is this relevant to know the real context. In case of this methodology-- once identified have the chance to run interviews with the farmer itself. Check if it makes sense with big data.
- Most of farmers don't think they have a forest-- don't perceive as a forest-- first interesting result of this. Can have different hypotheses. Whether farmer has conscious in terms of forest left.
- At national level-- definition of forest, real forest that has a function as a habitat for animals.
- Interesting to see how national definition can shape communities definition of what is a forest and what is not. The remaining vegetation be called a forest. Height of trees is important-- many different perspectives. See if macro data makes sense in this context.
- Comment also has a second layer-- how is it useful for community. How can make use of this in a practical way-- how is this useful for them. Big paradigm-- not able to break on this initiative
- We create data for policymakers-- local, national, government authorities. Policymakers are everyone who has a voice in what you're working on. Directly implied with action.
- Rather than just having relationship with extraction-- breaking that relationship-- farmer as main policymaker of information we're collecting.
- This is something, one of the downsides of this work, couldn't make farmer as main policymaker. Farmers may not feel as confident with types of data applications.

- Using the data-- 2% of population can use? Then I'm failing. It has to be easily consumable.
- Michelle: Role of data in addressing environmental issues-- general hypothesis that the open movement can do more for the climate crisis. Any suggestions for the open movement more broadly? How can we be more effective?
- Ana: Policymakers in micro-scale rather than macro. In terms of climate change-- put pressure on those that work with land and fish so we can have access with resources. Open climate movement, thinking of policymakers as individuals. Make data useable for them
- Easy to share results on digital web platform or other NGOs, but how do you make that useful for farmer-- it's a completely different logic. How can I narrate in a way that makes sense for what you do
- Angela: Enjoying hearing about this-- when thinking about the farmers as being primary policymakers, how data is used and who gets to use the data, looking at it as a two-way street.
- Who gets to have a say and how data is presented to a person on the ground making policy.
- Resistance felt-- data is all messy and all over the place. Instead of thinking about data and data collection as an activity that draws communities together-- looking at pseudo-participation in terms of being able to interact with data and systems that change. What might next generation of data be.
- More open you have, the more transparency you have. The more transparent the conversation is-- community, government, government.
- A lot is about creating awareness when you participate-- monitoring, participation, etc.
- In whatever part of society you have in this movement. Observant of how we're collecting data for transparency.
- Alex: Related question-- open movement tends to pivot towards legal/tech openness. Software does x thing. In your encounters with open-- literacy, awareness-- other classes of open that you'd want people to address-- social, communication, format. What else is going on there?
- Angela: Greater interaction-- not just a scientific endeavor-- if that's the only way you can make meaning out of data then the open movement has failed
- Alex: Interactive accessib=ility
- Angela: how we interact with data and where we do that, what if I'm inputting info about weather, my experience of weather-- helps people in a great sense. Personal decision-making in public. Data had other benefits of creating transparency between groups. Be of use for all groups.
- Ana: To add up on Angela, open in the sense of is it useful for different audiences? is the format right?
- Alex: Transparency between groups
- Emilio: What role does having liberties of being able to add/remix/etc-- may be a basic question, but would still like to explore from your perspectives. How would you describe added value of open source. Ana talking about public + open, but an added value of open.

- Angela: Whenever you have closed data systems or hidden data systems, even if meant to be open-- but not accessible-- create my data v your data. Whose data is most appropriate to be using to answer this question. With open data, not arguing about legitimacy-- one of benefits is if you feel like there's a data gap, you can contribute to making sure it no longer exists. More participation, baseline of participation. Not you're collecting it because "I don't believe you"
- Tobias: All sustainable topics-- greenwashing going on-- can prove things with open data, have a common measure about what is and isn't sustainable. Largest value for open data in the area of sustainability. Prove with open data that they are sustainable.
- Chat Q: Ashley MP: I know that the case study today emphasizes how open data can be valuable to the farmers, valuable perspective. I also want to pose how then might open data from this angle be used to perpetrate human rights concerns and violations in a climate-changing world? Thinking of agriculture expansion and deforestation in Amazon impacting Indigenous communities and the loss of their territories through ag expansion.
- Ana: @Ashely fully agree with your comment/question in this case data was used to identify sustainable practices but it can be used to see the pressure put on indigenous territory
- Luis Felipe: @ashley @ana in June, we will have a discussion about this topic in specific with a colleague who is mapping the illegal forestation in the Brazilian Amazon---for his work, the question is really to log into illegal mining and logging
- Ana: There might have been certain points to take technical decisions differently-- failure of method/decisions. Be calmer in terms of all data-- can have better data quality, if we're okay with that and open to receiving critiques-- no academic support and so on, always part of the discussion.
- More sources of data will be open-- know data had issues, but this problem framing is problematic-- some of data might have misinterpretation, just be more honest in terms of data limitations. The whole logic of "who can use it" is it in the right format.

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March 30, 2021: 10am ET (find your time)

OpenClimate community call:

- What is the *thing* that the Open movement can contribute to solving the Climate Crisis?
- Where do you go to find solutions / information about how to solve some of these problems?
- How do you close the information gap?

Facilitator: Evelin Heidel

Presenters: Emilio Velis, Appropedia; Tjark Döring & Tobias Augspurger from Open Sustainable Technology

Attending (please leave your email if you'd like information on others calls in this series):

16 attendees total

- Michelle Thorne (@thornet)
- Anna Knörr (ETH Zurich, https://ssc.ethz.ch/)
- Alex Stinson (Wikimedia Foundation @sadads)
- Ryan Fobel
- Marcela Basch (@marbasch)
- Dhruti Patel
- Max Mahmoud Wardeh
- Tjark Döring
- Shannon Dosemagen

Notes:

- Background on idea: Started asking questions with Alex Stinson-- connection and intersection between climate crisis and open movement.
- Started having conversations around how to explore this topic with Shannon Dosemagen, Michelle Thorne, Emilio Velis
- Doing a series of calls over next six months -- this is a pilot
- Evelin Heidel, Scann, long time member of CC-- community organizer working with OpenGLAM, archives and museums. Moving to other things re climate
- Tjark-- new contributor to open movement, open sustain project-- started a few months back. Doing part in climate change fight. Mechanical engineer by trade.
- Alex Stinson-- Wikimedia Fdn, how the wikimedia comm can organize to participate in various spaces. UN Human Rights on right to a healthy environment
- Anna Knorr-- Came across via
- Bri Johns-- Undergrad at NC State, community coordinator for GOSH
- Peter Murray Rust-- Shuttleworth Fdn-- extracting knowledge from scientific lit, German TIB (Simon Worthington) set up Force11 group to extract climate literature https://www.force11.org/group/open-climate-knowledge
- Christian-- math grad student in California
- Marcela Basch-- Journalist in Argentina, interested in the whole open/free commons and collaborative movement. Through different ways have met Scann, Emilio, Shannon, Bri. Happy to see people together. Linking open and climate to see what we can do-- great!
- Tobias: Created open sustain tech project, mapping every open and free project that is related to topic to climate change and sustainability. Working as an aerospace engineer for climate in Germany
- Michelle THorne: Worked in open mvmt for last 10 years-- questions around sustainability ad the internet, dismantling the things delaying climate action
- Ryan Fobel: Biomedical engineer and hardware designer, have met people through GOSH community. Interested in climate activism-- Friday for the Future, 350, finding ways to bring two things together.

- Renee Hoyos: Environmental Leadership Program-- fellow in 2010, candidate in U.S. endorsed by Sunrise Movement. Professionally a water quality and EJ specialist-- hopped on to find out more about what we're doing.

Presentations (food for thought/conversation starter)

- Help fill the map that we've started creating: https://miro.com/app/board/o9J_lO7qZrg=/
- Emilio Velis, Appropedia
    - Engineer by training, worked in international development, made me get to work as part of Appropedia-- what we mean when we talk about environmental data
    - Around numbers adn mechanized variables that are being measured.
    - Spatial representations-- useful for making decisions, most likely to a top level to lots of people
    - For some others, comes down to how to communities use and gather information
    - In some-- what are perceptions of data, in personal experience have done a little of both.
    - Workshop in Colombia-- putting together hardware for disaster response and relief together with community work. Have done a few times-- people can define what they want to measure.
    - Experience in working in areas affected by climate change and natural disasters
    - Data and information pick different nuances and approaches, moving to different areas, living in place, etc.
    - When connecting these two sides of using data-- difficult to connect them and has to do with a paradigm of international development an citizen science in general.
    - SOmetimes collaborations are very centralized or uni-directional, experts that come to a community, gather info, facilitate workshops, etc. Take information, these are the people that use information.
    - May happen that in other non-open realms, much of collab happens between people that are similar in approaches and needs-- gov't institutions, scientists
    - Because knowledge, skills and tools are specialized-- usually when we think about environmental and climate data, think about specific devices that need to be calibrated in a specific way so they can measure-- know how is specialized-- complicated to bring it down to the community
    - Appropedia: Yochai Benkler-- goodness of peer production, decentralization, execution of problems, separation of government contract
    - Collaborate in whatever way they want despite having different motivations and backgrounds
    - Wiki for projects-- for how people do things, reached a high number of contributions, many require lots of hours of work, projects or processes for porting international development briefs
    - Comprise the start to finish for projects
    - Some of the projects we can find on Appropedia are about measurement, done by students-- undergrad and grad students-- hardware for communities or clients

    - Always information about how these problems are being tackled-- other than the projects, when we think about using information about environment for research-- about information that is mechanized, turned into numbers and then analyzed
    - In process, needs to be a way to establish ways of doing it right
    - Research building on Joshua Pearce's lab-- photovoltaics, solar energy, etc.
    - How research is being done, think about different degrees of abstraction that information takes, data presented at end, but also devices as another layer
    - Calibrated or standardized from list of vendors, always the issue of an open world
    - When we think about using hardware-connecting data with real world scenarios-- part of why we're working on these calls-- connect real world scenarios with the work we're doing.
    - Standardizing the way that hardware is built-- open know how, developed by group of people from different parts of world-- a set of metadata we're trying to put together so anyone can reproduce the hardware being built-- making sure scientific hardware being made by labs around the world-- serving to community and have things to create themselves.
    - All of this can lead to projects being open to research and discoverable, one of the good things about having well said data and organized information for data and projects
    - Process undergoing-- create standards and guides what are the best ways to document hardware or projects. In a way we document how to do and acreate something-- all of these have to be documented in a certain way
    - Environmental data, something that we've been thinking of-- work of Public Lab in documenting field notes, documentation on how measurements that are taken, have tried to emulate so Appropedia community can document in an easy fashion and transfer to others.
    - Working on template for annotated video, useful for people who want to give out information in a way that's structured.
- Protontypes
    - Worked for DHL and research institute, automated trucks for yacht, built robots-- in robotics there's lots of OS going on
    - Built software stack based on OS tools, cooperation with institutes-- AI frameworks
    - Switched career: curious if open and sustainable tech-- the same mindset can be found
    - Community was much more split, learned it is the best way to share and transport knowledge worldwide
    - Created accelerator-- free and sustainable tech, do it with startups, mindset for going open
    - Open source and movements, involved in science-- how science was 100 years before. People just published things and someone built on top of publication
    - Today science is not like this anymore, in the past it was more the mindset of building on shoulders of giants.

- Have true, sustainable, because learned from personal experience and know with Protontypes-- lots of marketing around sustainability but not so much action
- Do things in a sustainable way, but more a marketing thing
- Good thing about openness is you can measure sustainability
- Don't believe in sustainability in less there is openness
- Need to spread knowledge worldwide to have an impact-- at institution creating patents on renewable energy, but to have a sustainable impact need open license
- No mapping going, map the complete open sustainable world on OpenSustain.tech
- Projects are handpicked, checked quality of documentation and tech-- openness mindset.
- From Max: @Tobias Have you looked at using https://openinventionnetwork.com/
- Photovoltaic-- robotics, common that you follow the unix philosophy-- important for what has made open source successful.
- Able to combine different open source projects to create something completely new
- At beginning of open source community-- small package and put together something new
- Things from Opensustain.tech website together and compensating energy consumption of servers and planting trees based on this
- Measure with different OS tools the power consumption, where to put trees with most impact on carbon cycle
- What is the percentage, do with another company-- reforestation as a service is not open source (using from another company), accelerate and build based on open source
- Down the line-- Open sustain academy to use the project
- Tried to automate-- define sustainable-- sustain project, have open sustain tech
- Want to sustain it in itself so people put new projects on the list-- in an automated way
- What we try to do now, planting 100 trees in an automated way when new project is added to the list
- Two weeks-- 7 pull requests
- Want to read out OpenSustain.tech database-- readme, read it in an automated way and gather metadata from GitHub and GitLab to automatically calculate metadata to check health of project-- is it still active, number of issues they have, need support, so they have a much more/easier way to browse database and get more information for every project
- Where it is growing and we can participate-- see where projects are missing, if they're depending on each other, or reinventing-- which is not sustainable.

Open conversation

- What file format using for map?
- Anna: Do you have a target audience in mind?

- Everyone who is developing software in this domain, if you want to build something sustainable, the audience is very broad. Most of the people want to understand what project is doing-- more technical, engineers and software developers-- develop something in this domain, look to the list, see that someone else did the same thing-- use the project not to reinvent the wheel
- Funding going around in this domain but no one listed it
- Business section is more for people that are starting a project and need funding-- could also be a hardware project, or someone that is not an engineer, but a business developer
- Problem we struggle with-- education and business section-- try to offer insights to more people, tend to reach people who are intimidated-- long term goal to reach people w/o academic call
- PMR: Impressed with analyzing popularity and health from GitHub, more valuyable than analyzing citations. Chance to interlink, use resources from others
- Hope to improve with automation
- Git Repository-- benefit is we can remit, don't want to focus only on GH, but also GL. Unsolved problem.
- Michelle: +1 to the health of a project on Github. The average contributors to an open repo are usually 1. :D
- Michelle: Interesting tension between Appropedia and Open Sustainalble Tech. What counts as a technology and which ways are we validating? Work and admire software-- a lot we can be doing at a software level, how can we expand, compliment different modes of achieving technology
- Technology first approaches-- climate crisis is not a tech crisis, how do we have appropriate hierarchies so that it's in service of life rather than in service of tech. In solutions approach have to account for this.
- Tobias: Open Sustain Tech, need to open up sustainability of tech-- need to open up what is actually sustainable tech and whats not.
- With data and models, can prove what is sustainable-- complex to measure and say nuclear, hydrogen, etc is sustainable
- Emilio: One of the things working in open hardware is that people don't know how to document them or what to put in them-- discussions about redefining open tech, also learning about how to tell a story about open tech
- Were discussing while working on metadata standards-- descriptive, number, date, but also why did you create it and what is it useful for.
- Nice monitoring device, but don't see it as an environment
- Having socially or more personally oriented approaches-- teaching people to tell those stories
- Max: Are you familiar with the work of the Software Sustainability Institute? https://software.ac.uk/blog/2020-02-19-it-takes-more-publications-recognise-everyone-research
- Michelle: Emilo, I love your point! Learning to tell a story about technology. And also validating many roles in tech including maintainer, localizer, documenter, etc

- Alex: Yeah, I think where a lot of the open movement has gaps around climate action is in the story we tell -- there are a lot of practices (i.e. collaboration, transparent data or science, public science communication) that are intuitive but not owned as a climate action/advocacy issue
- Max: Is problem with discoverability-- open resources, all of these efforts, working on different efforts focused more on education side, what Tobias was saying, once you put an enclosure around something-- you're really damaging it's potential use especially when it comes to climate change
- Wondering about using systems that are already in place: open innovation network-- not familiar with them. Opinions on if they're a useful model for pushing institutions to use patent pools like OI network.
- Highlight software sustainability institute-- contributions to software have same level of recognition, reuse work and introducing into this community
- Alex-- both of these projects highlight the need for storytelling, documentation and connecting issues together, we need to document them, need the right metadata
- Scann and Alex-- early thesis, there is a story and it's missing here, great way to start. Storytelling between open movement and environment
- Emilio slides: https://www.appropedia.org/OpenClimate#March_30,_2021:_10am_ET_(find_your_time)