

# Internet Governance & DEI

*JEDI: Justice, Equity, Diversity, Inclusion*

Vesna Manojlović | [BECHA@ripe.net](mailto:BECHA@ripe.net) | [@becha@social.v.st](https://www.instagram.com/becha@social.v.st)  
/etc, Berlin, June 2024





We live in capitalism, its power seems inescapable - but then, so did the divine right of kings. Any human power can be resisted and changed by human beings. Resistance and change often begin in art. Very often in our art, the art of words.

— Ursula K. Le Guin —

AZ QUOTES



IF YOU HAVE COME HERE  
TO HELP ME, YOU ARE  
WASTING YOUR TIME.  
BUT IF YOU HAVE COME HERE  
BECAUSE YOUR LIBERATION IS  
BOUND UP WITH MINE, THEN  
LET US WORK TOGETHER.

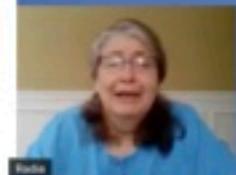
- LILLA WATSON  
Indigenous Australian visual artist,  
academic, activist

#FEMINISTFRIDAY



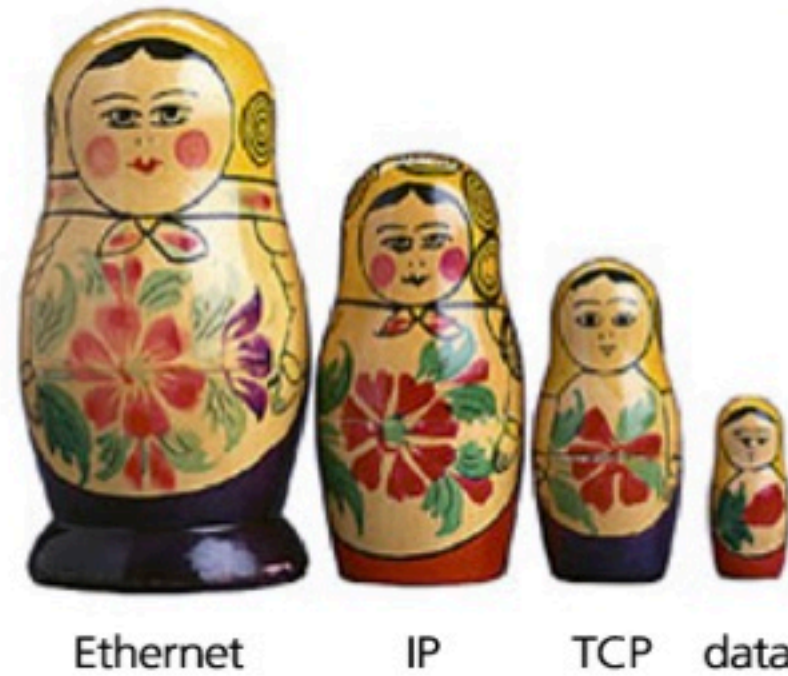

**ELINOR OSTROM**  
2009 Nobel Laureate  
in Economic Sciences

<https://archive.org/details/governingthecommons>



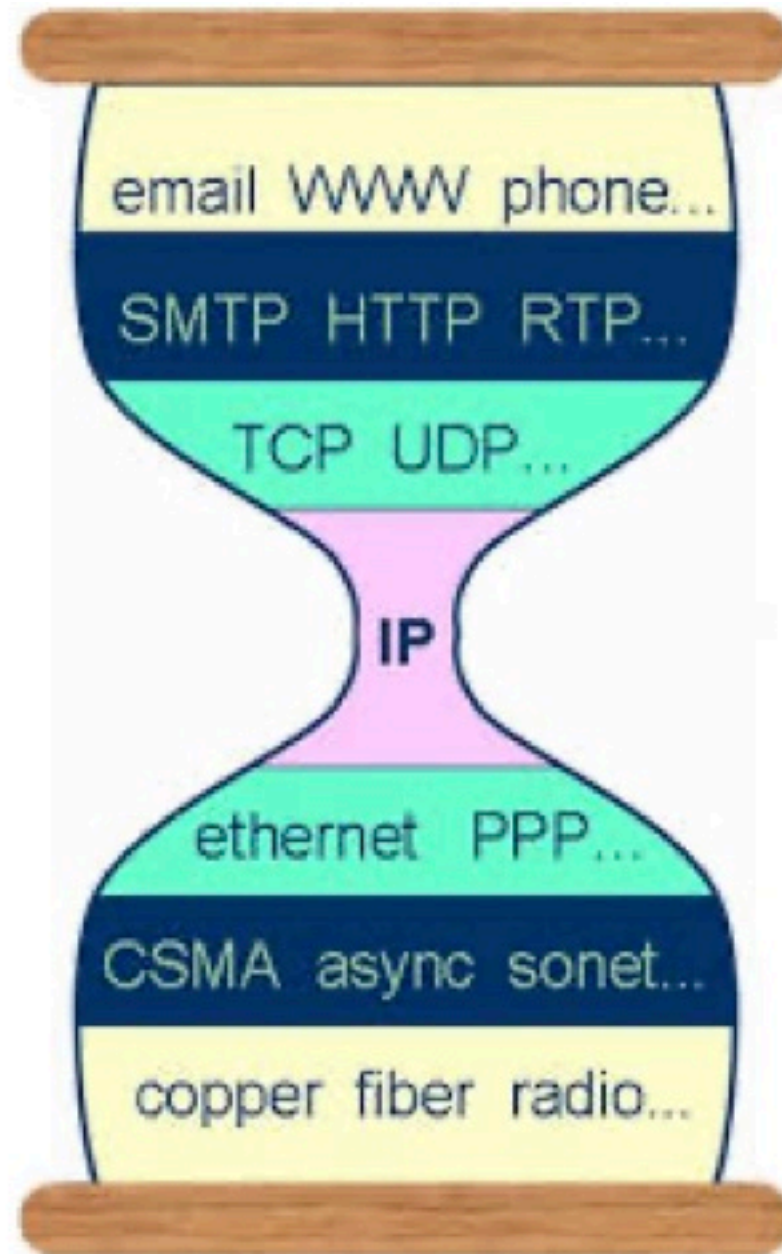
Radia Perlman

The Internet: Can we survive  
with it?

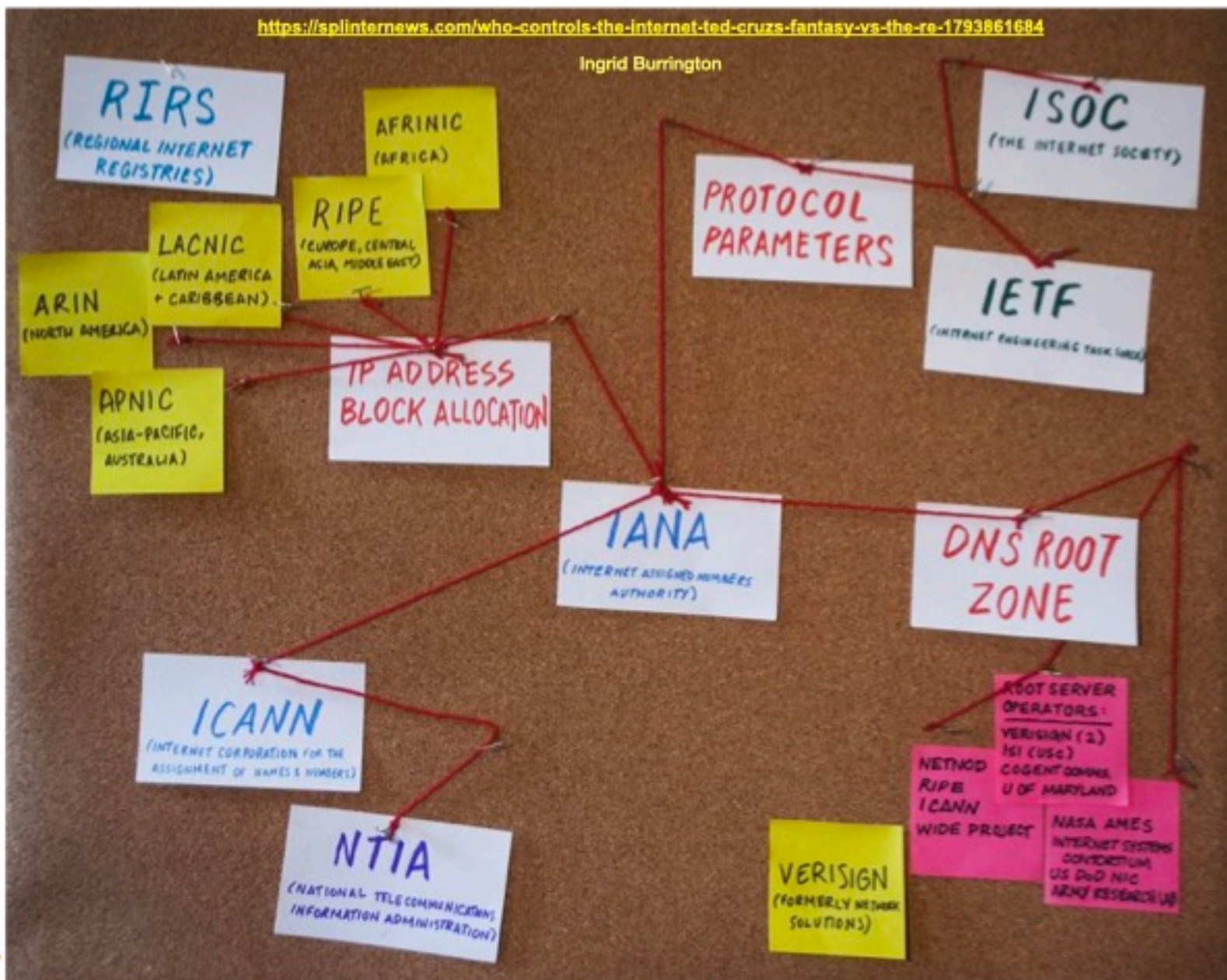


<https://wiki.techinc.nl/User:Becha/InternetPlumbing>





Ingrid Burrington





# Regional Internet Registries



**ARIN**  
American Registry for Internet Numbers

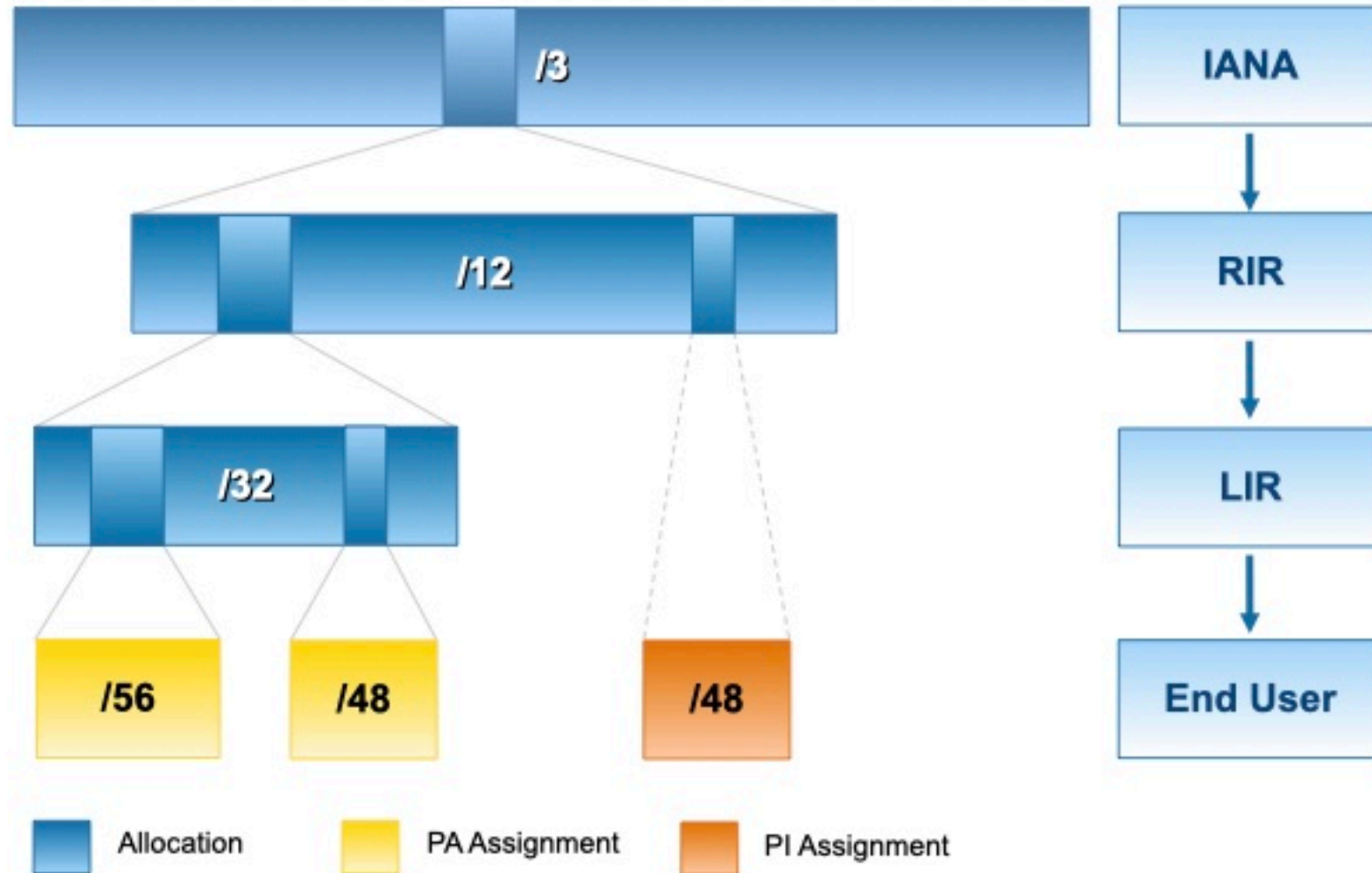
 **RIPE NCC**  
RIPE NETWORK COORDINATION CENTRE

 **APNIC**

**lacnic** 

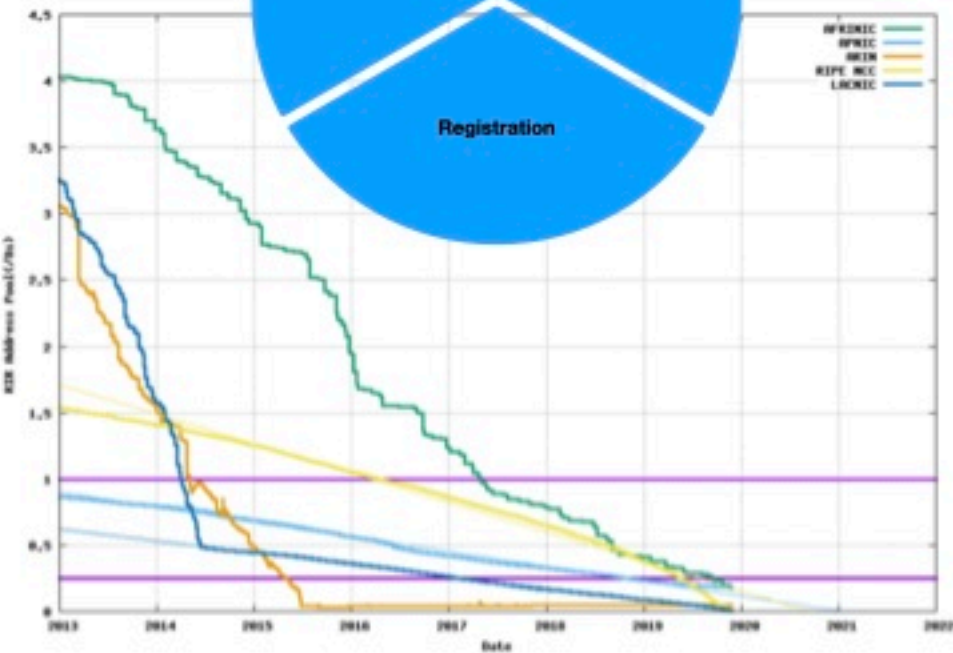
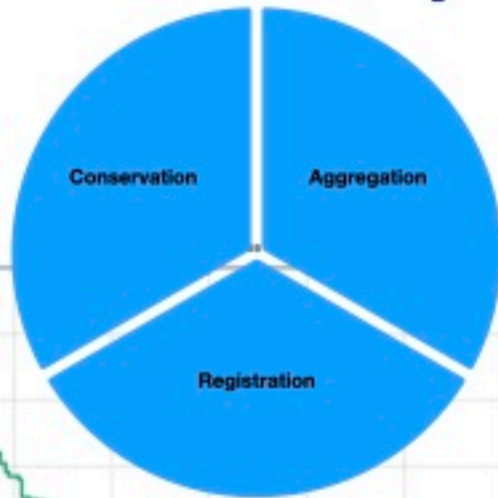
**AFRINIC**   
The African Internet Registry for Numbers

# IPv6 Addresses Distribution

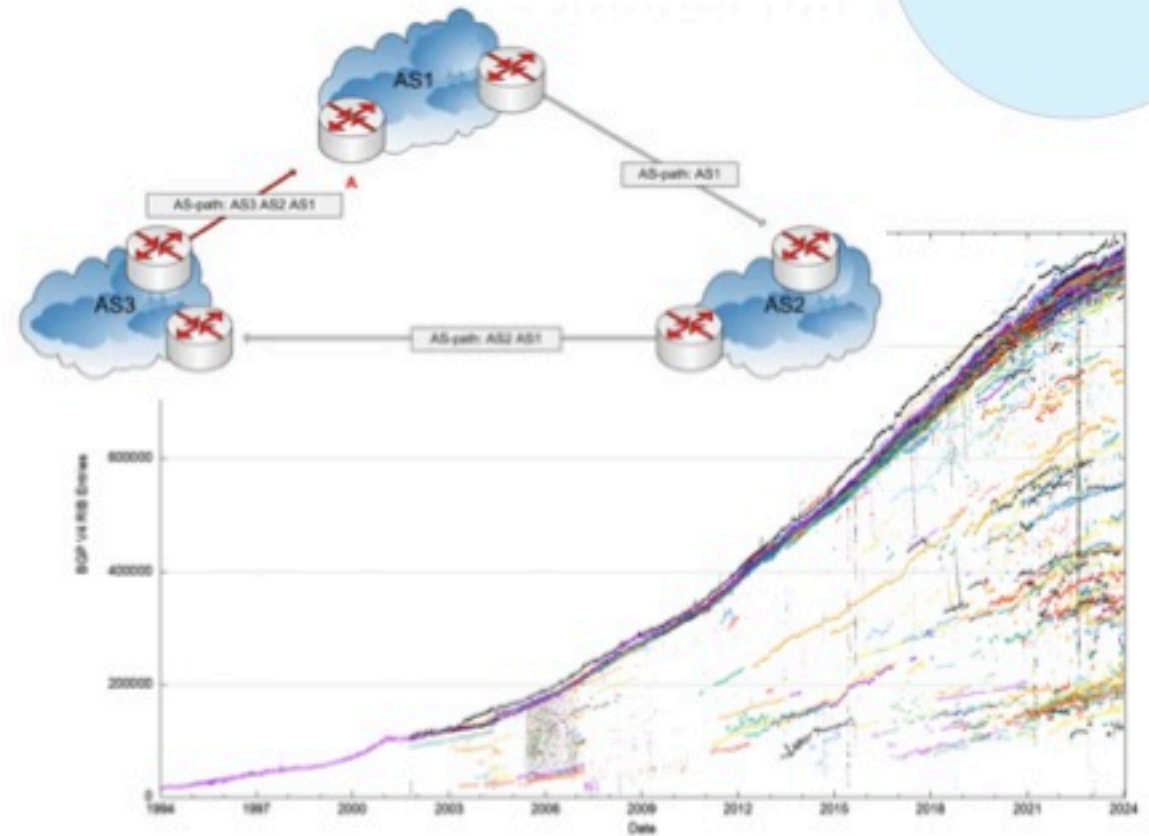




# Principles for Fairness & Routability



[https://en.wikipedia.org/wiki/IPv4\\_address\\_exhaustion](https://en.wikipedia.org/wiki/IPv4_address_exhaustion)



<https://blog.apnic.net/2024/01/09/measuring-bgp-in-2023-have-we-reached-peak-ipv4/>

# Social Scientist about Operators' Community



- Uta Meier-Hahn
- **“Internet Interconnection: Networking in Uncertain Terrain” (2015)**
  - [https://labs.ripe.net/author/uta\\_meier\\_hahn/internet-interconnection-networking-in-uncertain-terrain/](https://labs.ripe.net/author/uta_meier_hahn/internet-interconnection-networking-in-uncertain-terrain/)
- **The Regulatory Conditions of IP Interconnection (2016)**
  - [https://labs.ripe.net/author/uta\\_meier\\_hahn/the-regulatory-conditions-of-ip-interconnection/](https://labs.ripe.net/author/uta_meier_hahn/the-regulatory-conditions-of-ip-interconnection/)
- **The Internet was Built on Trust. But What Does it Run On? (2017)**
  - [https://labs.ripe.net/author/uta\\_meier\\_hahn/the-internet-was-built-on-trust-but-what-does-it-run-on/](https://labs.ripe.net/author/uta_meier_hahn/the-internet-was-built-on-trust-but-what-does-it-run-on/)

# RIPE (community) and the RIPE NCC





# RIPE Working Groups



Address Policy Working Group

Anti-Abuse Working Group

Connect Working Group

Cooperation Working Group

Database Working Group

DNS Working Group

Internet of Things Working Group

IPv6 Working Group

MAT Working Group

Open Source Working Group

RIPE NCC Services Working Group

Routing Working Group

- <https://academy.ripe.net/ripe-wg-chairs>
- **The RIPE Community and its Structure**
- **The Role of the RIPE WG Chair**
- **How is Work done in RIPE Working Groups?**
- **How do you keep a WG working?**
- **How are RIPE policies made?**
- **Building consensus**
- **Making Sure Everyone Is Respected And Included**
- **How do I Become a Working Group Chair?**

# RIPE & Diversity



- **Diversity** <https://ripe.net/diversity>
  - mailing list <https://lists.ripe.net/mailman/listinfo/diversity>
  - [“DEI in Tech” sessions at RIPE meetings](#)
- **Academic Grants:** <https://ripe.net/raci>
- **Travel Grants:** <https://ripe.net/fellowship>
- **Community Projects Fund (4FLOSS)** <https://ripe.net/cpf>
- **Free Learning:** <https://ripe.net/training>
- **FLOSS Hackathons:** <https://labs.ripe.net/hackathons/>
- **Code of Conduct:** <https://ripe.net/coc>
- **RIPE / NCC:** <https://forum.ripe.net>

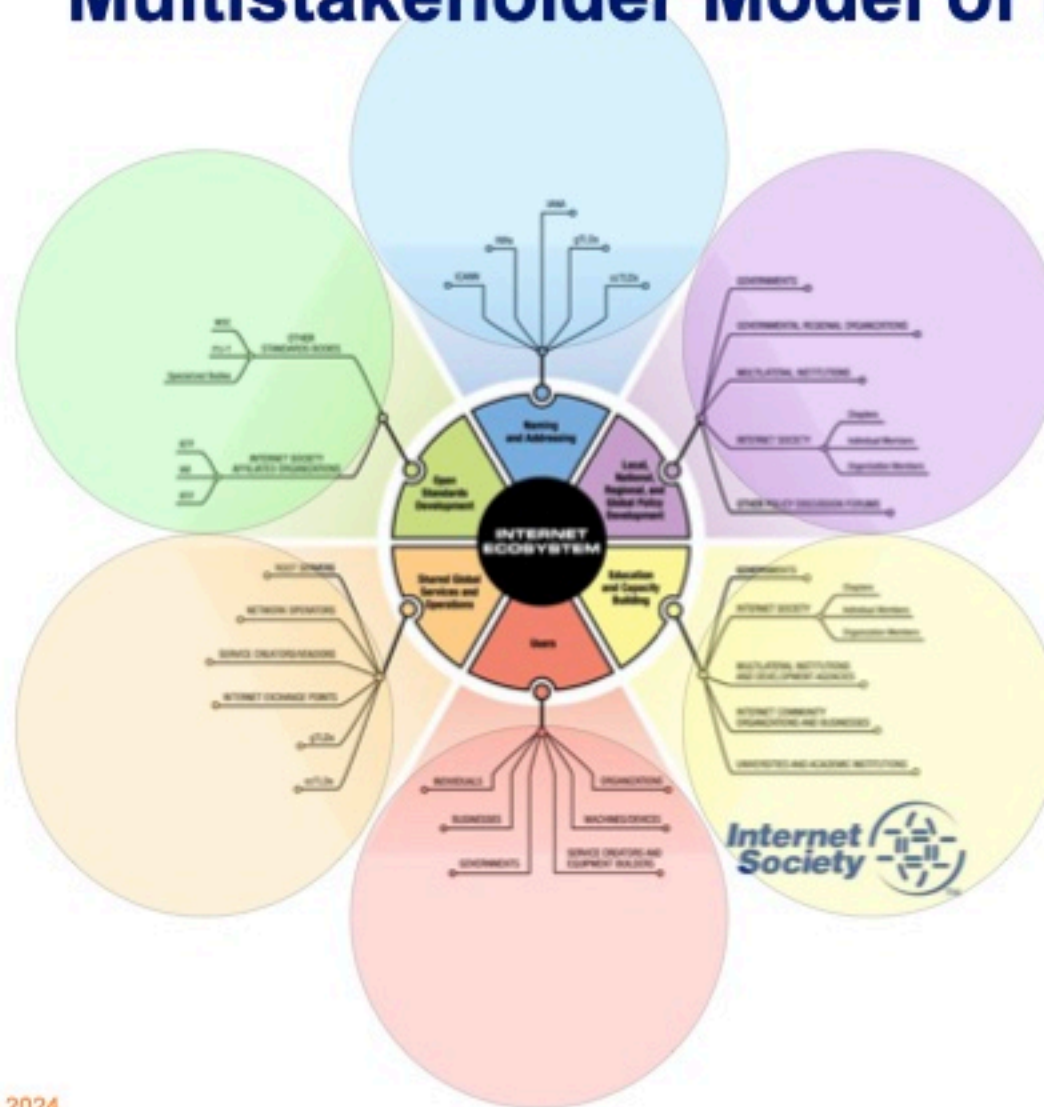
# Diversity: Sessions, Articles, Videos



- **Since 2022, I have been curating RIPE “Diversity in Tech” sessions**
  - <https://ripe85.ripe.net/programme/meeting-plan/diversity-in-tech/> || <https://ripe86.ripe.net/programme/meeting-plan/diversity-in-tech/>
  - <https://ripe87.ripe.net/programme/meeting-plan/diversity-equity-inclusion/>
  - <https://ripe88.ripe.net/programme/meeting-plan/diversity-equity-inclusion/>
- **Building Bridges** <https://labs.ripe.net/author/becha/building-bridges-between-diverse-communities-at-ripe-85/>
- **Diversity Matters at RIPE 83** <https://labs.ripe.net/author/becha/diversity-matters-at-ripe-83/>
- **Embracing Neurodiversity** <https://labs.ripe.net/author/becha/ripe-community-resilience-embracing-neurodiversity/>
- **Community Resilience (NLNOG, video)** <https://www.youtube.com/watch?v=YcrI7NI8sOY>
- **Safety Net** <https://labs.ripe.net/author/becha/ripe-community-resilience-safety-net/>
- **Economy of Care** <https://labs.ripe.net/author/becha/ripe-community-resilience-economy-of-care/>
- **Cross-connecting** <https://labs.ripe.net/author/becha/spring-and-summer-events-season-2022/>
- **History / ex-YU** <https://labs.ripe.net/author/becha/the-history-of-the-yugoslavian-internet-live-at-see-10/>



# Multistakeholder Model of IG



# Internet Governance & Technical Standards



- **Needs:**
  - “new energy”, creative ideas, alternative views
  - participants / speakers for events
  - contributions to mailing lists & forums
  
- **Offers:**
  - travel grants, fellowship & mentoring, interns positions
  - “academic cooperation” programmes
  - training & workshops & education materials
  - hackathons

# Data Feminism, Data Justice



**Table 2.1: From data ethics to data justice** <https://datafeminism.io/>

<b>Concepts That Secure Power</b>	<b>Concepts That Challenge Power</b>
Because they locate the source of the problem in individuals or technical systems	Because they acknowledge structural power differentials and work toward dismantling them
Ethics	Justice
Bias	Oppression
Fairness	Equity
Accountability	Co-liberation
Transparency	Reflexivity
Understanding algorithms	Understanding history, culture, and context

<https://labs.ripe.net/author/becha/data-feminism-from-data-ethics-to-data-justice/>





# WHEEL OF POWER/PRIVILEGE



Adapted from ccrweb.ca

@sylviaduckworth

# The Myth of “Openness”



- **Allison Parrish: “Programming is Forgetting: Toward a New Hacker Ethic”**  
<http://opentranscripts.org/transcript/programming-forgetting-new-hacker-ethic/>
- **Debbie Chachra** [theatlantic.com/technology/archive/2015/01/why-i-am-not-a-maker/384767/](http://theatlantic.com/technology/archive/2015/01/why-i-am-not-a-maker/384767/)
- **Flavia Dzodan** <https://artificeofintelligence.org/non-consensual-bots-and-personal-space/>
- **Hackerspaces...** [https://wiki.techinc.nl/Ladies\\_Night](https://wiki.techinc.nl/Ladies_Night)
  - <http://becha.home.xs4all.nl/hackerspaces-patriarchy-equality.html>



# I\* Organisations & “Diversity”



- **IETF: <http://ietf.org/diversity/>**
  - <https://criticalinfralab.net/wp-content/uploads/2023/06/LoudMen-CorinneCath-CriticalInfraLab.pdf>
  - <https://www.ietf.org/blog/report-experience-of-women-participating-in-the-ietf/>
  - Systems: <https://www.ietf.org/participate/ietf-systems/>
  - <https://www.irtf.org/travelgrants/>
  - <https://www.ietf.org/meeting/hackathons/>
- **ISOC: <https://www.internetsociety.org/fellowships/mid-career>**
- **ICANN: <https://www.icann.org/fellowshipprogram>**





# Misc Internet Governance Links



- **CENTR:** [https://centr.org/images/CENTR\\_Why\\_We\\_Need\\_Multistakeholder\\_Internet\\_Governance.pdf](https://centr.org/images/CENTR_Why_We_Need_Multistakeholder_Internet_Governance.pdf)
- **W3C:** <https://www.w3.org/> (& <https://berjon.com/w3c-governance/> )
- **FLOSS :** <https://writefreesoftware.org/> & [FOSDEM.org](https://fossdem.org/)
  - <https://hamishcampbell.com/some-aspects-of-the-geekproblem/>
- **“Feudalism”** <https://newpublic.substack.com/p/the-internet-was-supposed-to-be-democratic>
- **AI:** <https://www.dair-institute.org>
- **Fediverse / Activity Pub:** <https://socialhub.activitypub.rocks/>
- <https://www.internetgovernance.org/2024/05/08/the-disappointing-netmundial10/>



<https://feministinternet.org/>



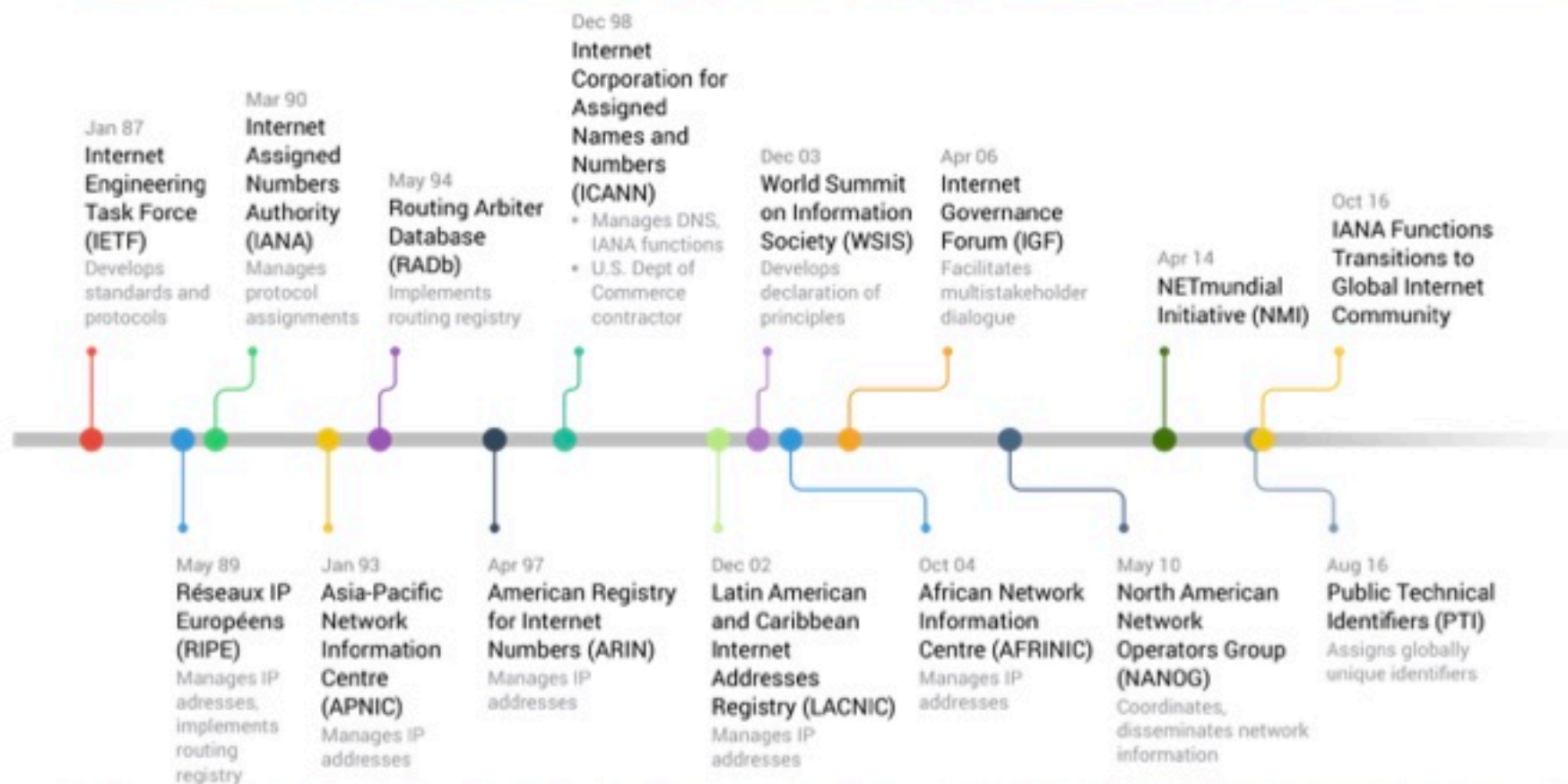
*hvala, hvale*

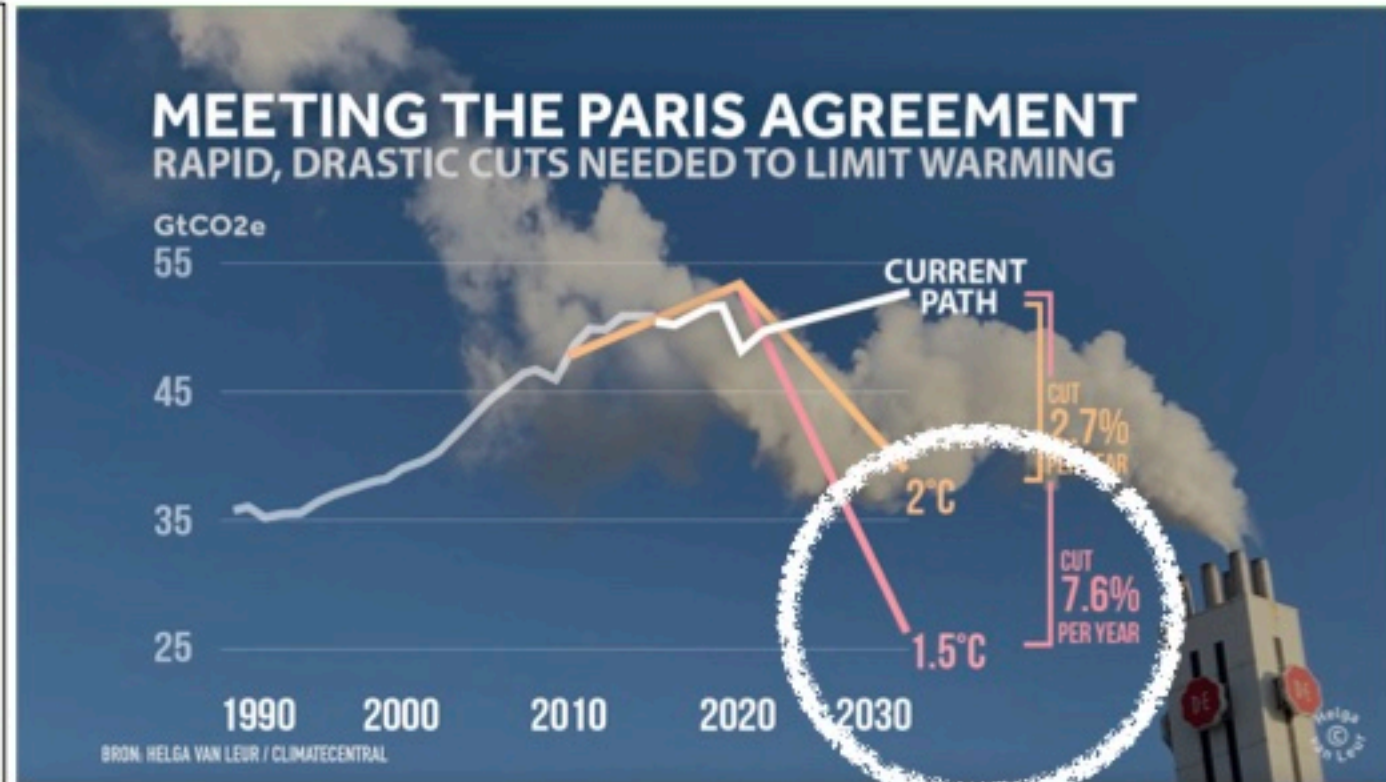
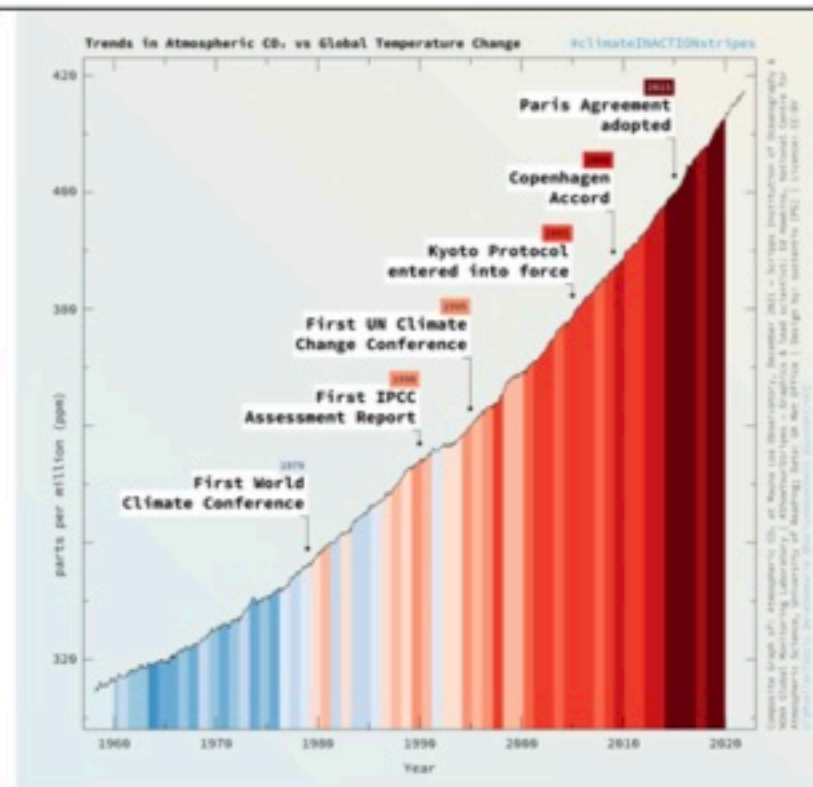




# **Bonus Slides: Internet Governance & Environmental Sustainability**

# Internet governance timeline





## Global Internet usage growth



The number of people using the Internet globally has doubled in less than a decade. Global internet usage growth from 1995 to 2022



Source: [Internet World Stats](https://www.internetworldstats.com/)

2. The average growth rate of internet users is 8.2% per year.

## The 100 largest companies in the world by market capitalization in 2022 (in billion U.S. dollars)



Source: <https://www.statista.com/statistics/263264/top-companies-in-the-world-by-market-capitalization/>

## Global trends in digital and energy indicators, 2015-2021

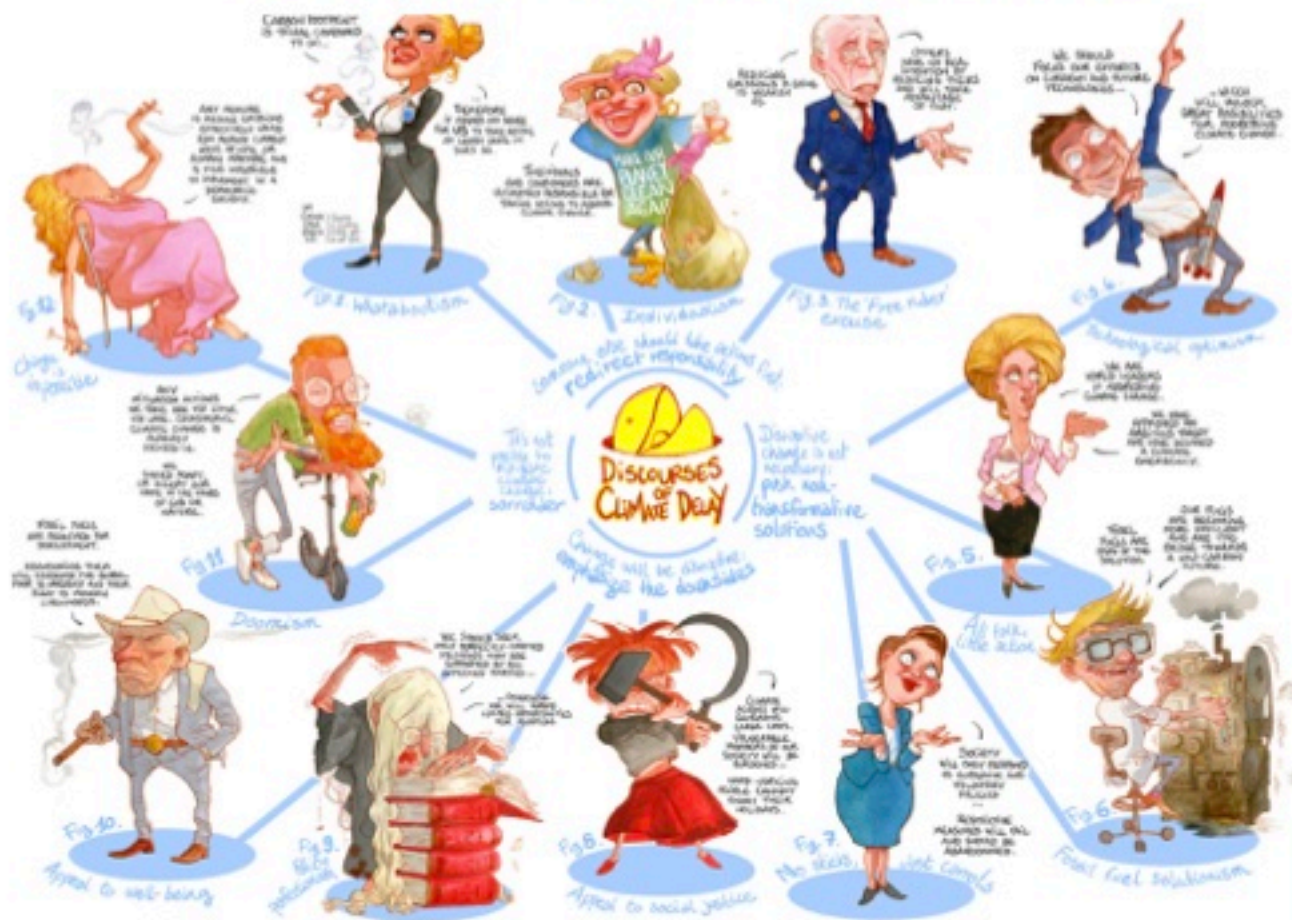
	2015	2021	Change
Internet users	3 billion	4.9 billion	+60%
Internet traffic	0.6 ZB	3.4 ZB	+440%
Data centre workloads	180 million	650 million	+260%
Data centre energy use (excluding crypto)	200 TWh	220-320 TWh	+10-60%
Crypto mining energy use	4 TWh	100-140 TWh	+2 300-3 300%
Data transmission network energy use	220 TWh	260-340 TWh	+20-60%

Source: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>





# “Delay is the New Denial”



[https://www.researchgate.net/publication/342596080\\_Discourses\\_of\\_climate\\_delay](https://www.researchgate.net/publication/342596080_Discourses_of_climate_delay)

# RIPE Meeting Talks on Sustainability



- RIPE75 (October 2017): “Internet Services and Energy Demand”, Mike Hazas <https://ripe75.ripe.net/archives/video/154/>
- RIPE81 (October 2020): Sustainable ICT Procurement, Michael Oghia, <https://ripe81.ripe.net/programme/meeting-plan/bof/#mon14>
- RIPE84 (May 2022): Towards a Fossil Free Internet, Chris Adams, Green Web Foundation <https://ripe84.ripe.net/archives/video/751/>
- RIPE85 (October 2022): 13 Propositions for a Burning World, Tobias Fiebig, MPI INF; Doris Aschenbrenner, Aalen University <https://ripe85.ripe.net/archives/video/877/>
- RIPE86 (May 2023): The Environmental Impact of Internet: Urgency, De-Growth, Rebellion , Vesna Manojlovic <https://ripe86.ripe.net/archives/video/1001/>
- RIPE87 (November 2023): The Internet of Tomorrow Must Sleep More and Grow Old, Romain Jacob, ETH Zurich <https://ripe87.ripe.net/archives/video/1143/>





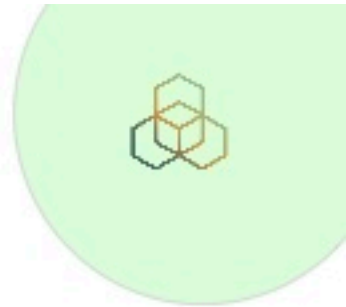
# Internet Industry & Climate Action



- **"Energy Consumption** in Data Centres and Broadband Communication Networks in the EU" (2024-02-16), (by European Commission's Joint Research Centre)  
<https://publications.jrc.ec.europa.eu/repository/handle/JRC135926>
- "The central role of **climate action** in achieving the United Nations' Sustainable Development Goals" by Inter-University Sustainable Development Research Programme <https://www.nature.com/articles/s41598-023-47746-w>.
- GSMA "2024: State of the Industry on **Climate Action**" <https://www.gsma.com/betterfuture/wp-content/uploads/2024/02/Mobile-Net-Zero-2024-State-of-the-Industry-on-Climate-Action.pdf>



# IETF & IAB



- **e-impact group**

- <https://datatracker.ietf.org/group/eimpact/about/>

- **IRTF: GAIA**

- <https://datatracker.ietf.org/rg/gaia/about/>

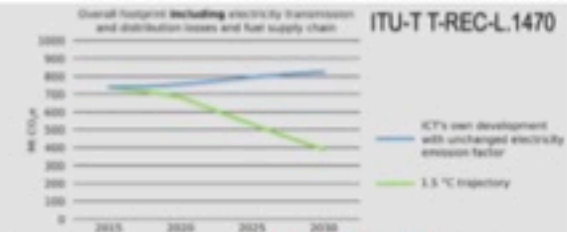
- **IAB: BIAS workshop**

- The Internet is an important tool to reach the SDG
- <https://datatracker.ietf.org/group/biasws/about/>

- **RFC8890** <https://ftp.ripe.net/rfc/rfc8890.pdf>

- <https://labs.ripe.net/author/becha/the-internet-is-for-the-empowerment-of-end-users/>

## Goals?



- Reduction of environmental impact of **about 50%** by 2030 to align with the IPCC 1.5°C trajectory, [ITU-T.L.1470] or severe effects for 2°C or ...

- **Keep warming at 1.5°C implies global emissions must peak by 2025 → in 9-10 IETF meetings**

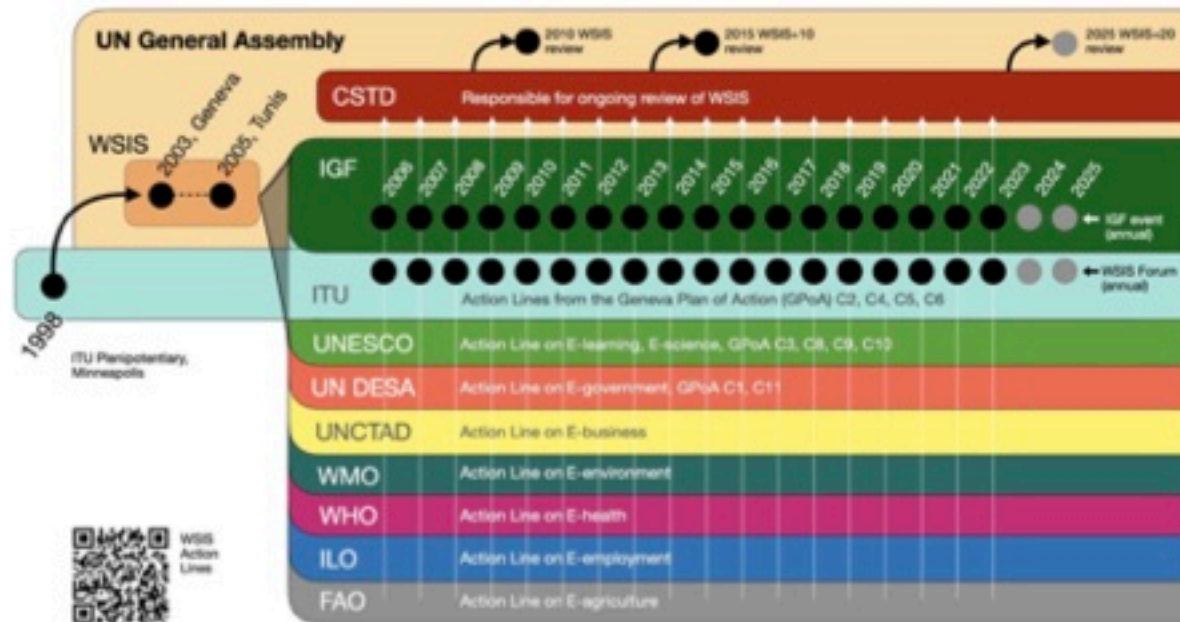
<https://theconversation.com/ipcc-report-global-emissions-must-peak-by-2025-to-keep-warming-at-1-5-c-we-need-deeds-not-words-165598>

- Contribution of ICT in electricity usage is a major green-house gases factor:
  - By **2030** it could use up to 51% of global electricity, and contribute up to 23% of globally released GHG emissions

A. Andrae, T. Edler. On Global Electricity Usage of Communication Technology: Trends to 2030. Challenges 2015

# Global Digital Compact & SDGs

## The WSIS Process - a timeline



<https://internet.exchangepoint.tech/internet-governance-roadmap-2024/>

<https://datatracker.ietf.org/meeting/interim-2024-iab-07/materials/slides-interim-2024-iab-07-sessa-internet-governance-now-00>

<https://www.apc.org/en/news/bringing-gender-justice-lens-uns-global-digital-compact>

# Internet Governance & SDGs



- **February 2024, EURALO** <https://atlarge.icann.org/ralos/euralo>
- **EuroDig:** [https://eurodigwiki.org/wiki/WS\\_04\\_2023](https://eurodigwiki.org/wiki/WS_04_2023)
  - Greening Internet Governance: **EuroDig 2020** [https://eurodigwiki.org/wiki/Greening\\_Internet\\_governance\\_-\\_Environmental\\_sustainability\\_and\\_digital\\_transformation\\_-\\_2020/2021](https://eurodigwiki.org/wiki/Greening_Internet_governance_-_Environmental_sustainability_and_digital_transformation_-_2020/2021)
- **IGF 2023**
  - “Climate change and Technology implementation” [https://www.youtube.com/watch?v=eirpgX\\_U5EA](https://www.youtube.com/watch?v=eirpgX_U5EA)
  - [https://labs.ripe.net/author/gergana\\_petrova/igf-2023-liveblog/](https://labs.ripe.net/author/gergana_petrova/igf-2023-liveblog/)
- **2021:** <https://seedig.net/seedig7-sustainable-future/>
- **ITU in 2020: “reduce ICT GHG emissions by 45% by 2030”**

# “Civil Society”: Academia, (h)Activists, NGOs...



- **Computing Within Limits**

- <https://labs.ripe.net/author/becha/computing-within-limits-2023/>
- 10th Conference: <https://computingwithinlimits.org> (18-19.June 2024)

- **Bits & Bäume (part of CCC)**

- <https://labs.ripe.net/author/becha/towards-climate-justice-in-tech/>
- <http://bits-und-baeume.org/>

- **Many other communities for climate action in tech**

- <https://wiki.mozilla.org/Projects/Sustainability/Research>
- <https://www.sigplan.org/Resources/Climate/>
- <https://climateaction.tech/community/>
- <https://www.apc.org/en/news/mobilising-collective-action-environmental-justice-and-sustainability-2020>
- <https://varia.zone/8m/>





# IETF / IRTF & “Sustainability”

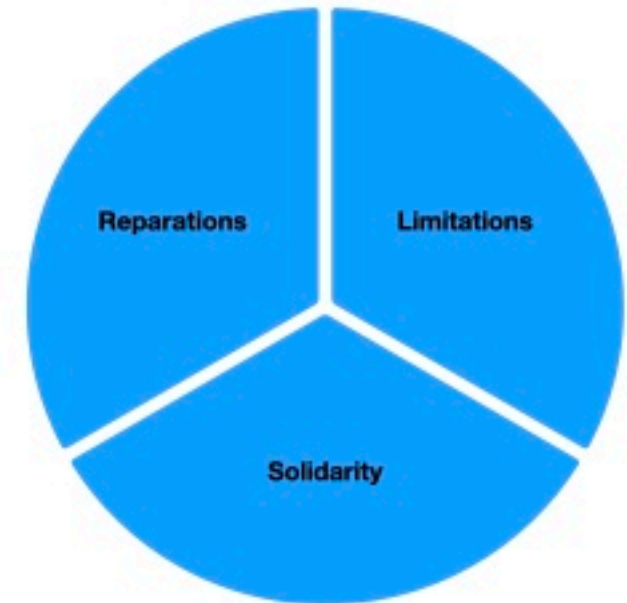


- IETF’s “e-impact”: <https://www.ietf.org/mailman/listinfo/e-impact>
  - “Full understanding of Internet’s environmental impact
  - Continuous improvement of our technology.
  - Launching research relevant activities”
  - <https://mailman3.ietf.org/mailman3/lists/green-bof.ietf.org/>
- IRTF: GAIA: <https://datatracker.ietf.org/rg/gaia/about/>
- IAB: BIAS workshop: The Internet is an important tool to reach the SDG  
<https://datatracker.ietf.org/group/biasws/about/>
- RFC8890 <https://ftp.ripe.net/rfc/rfc8890.pdf>
  - <https://labs.ripe.net/author/becha/the-internet-is-for-the-empowerment-of-end-users/>

# Principles for Climate Justice in Tech

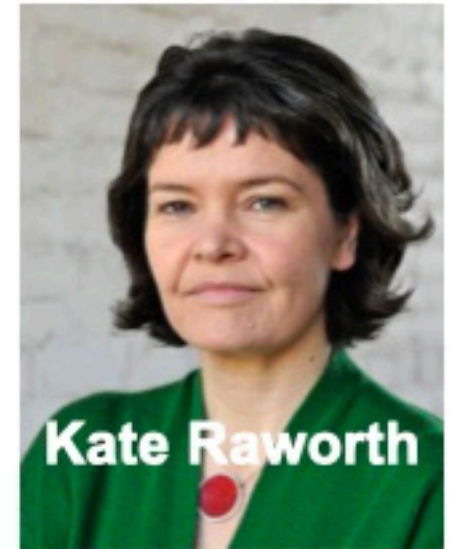


- “Towards Climate **Justice** in Tech”
  - <https://labs.ripe.net/author/becha/towards-climate-justice-in-tech/>
- **Limiting** extractivism & decreasing growth
- **Reparations**: giving back to the most affected communities
- Acting in **solidarity** with the frontline communities & centering marginalised groups; mutual aid





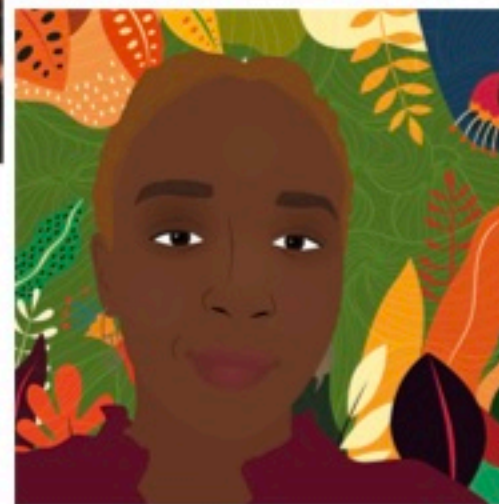
# Decolonizing Internet, Economy, Ecology...



Kate Raworth

## VANDANA SHIVA

*"I think the combination of feminism and ecology creates two potentials. First, I have seen feminism that is not ecological become a new oppressor. I have seen environmentalism that is not feminist enough also become a new elitism. Ecofeminism prevents those two new forms of elitism by saying, No, it's about society and nature. It's about other ways of thinking"*



Nonhlanhla Makuyana



Image: Kate Raworth and Christian Gubier/The Lancet Planetary Health

# Inspiring Examples



- **Reduce, Repair, Repurpose, Recycle (equipment)**
- **Community Networks, Mesh, Low-power networking, disaster-recovery net**
- **Decolonising the Internet, Feminist Internet, Solar Internet**
- **Low-tech, Slow tech, Retro-tech, Green Tech, Appropriate Technology**
- **Counter Computings: Frugal-, Convivial-, Benign-, Permacomputing**
- **Self-hosting, federation, decentralised networks**



 Vesna Manojlovic  
@becha · 2 hours ago

Eunice Newton Foote wrote a first paper (1856) on relationship between carbon dioxide and the earth's climate <https://archive.vn/DPhg2>



**ALT** Newton Foote. (Pictorial Press Ltd/Alamy)




- My Top 10 21st-Century Alternative Economic Theory Books:**
- Giving Economy, Heather Marsh (in "Binding Chaos", 2013)
  - Post-carbon Economy, Naomi Klein (in "On Fire", 2021)
  - Caring Economy, Riane Eisler (2007) : <http://caringeconomy.org/>
  - Decolonising Economics, Nonhlanhla Makuyana (2021) <https://decolonisingeconomics.org/>
  - Ecofeminism, Maria Mies and Vandana Shiva (2014) <https://www.environmentandurbanization.org/ecofeminism>
  - Mutualism, Sara Horowitz (2021)
  - Doughnut Economics, Kate Raworth (2017) <https://doughnuteconomics.org/>
  - Mission Economy, Mariana Mazzucato (2021)
  - The Support Economy: Shoshana Zuboff (2002) <http://www.thesupporteconomy.com/>
  - Enlightenment Economics, Diane Coyle (in "The Economics of Enough", 2011)

<https://labs.ripe.net/author/becha/ripe-community-resilience-economy-of-care/>

  
[https://wiki.techinc.nl/Female\\_experts#on\\_alternative\\_economy.2C\\_against\\_capitalism](https://wiki.techinc.nl/Female_experts#on_alternative_economy.2C_against_capitalism)

Re-Enchanting the World:  
Feminism and the Politics of the Commons  
A Lecture with Silvia Federici



April 4th,  
2019, 5-7pm  
Bernie Dallas Room,  
Goodell Hall  
UMass, Amherst  
Free and Open to the  
Public





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**1860s - 1910s, England**  
 Statistician Florence Nightingale & physician Elizabeth Garrett Anderson, women's suffrage movement



© Cyrn A. Silva CC BY 2.0

**1920s, Brazil**  
 Biologists from National Museum, environmental protection



© Science for the people  
 AN HUMANITY PUBLICATION • SCIENTISTS • ENGINEERS • SOCIAL • POLITICAL ACTION STRATEGY

**1960 - present, USA**  
 Science for the People collective, anti-war and social justice



© SR Nigeria



© SR Spain



1962



© SR Panamá

**2020s, Worldwide**  
 Scientist Rebellion, climate and ecological breakdown

Vesna Marnjanovic @vesna\_m...  
 Florence Newton Foote wrote a first paper (1856) on relationship between carbon dioxide and the earth's climate <https://archive.vndp.org/>



© Vesna Marnjanovic

1856!



© Anefo CC0 1.0 | © Orren Jack Turner CC0 1.0

**1957, USA & Europe**  
 Nobel winners' Russell-Einstein Manifesto, abolition of atomic weapons and war



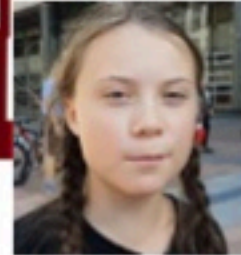
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**1988 - present, USA**  
 Climatologist James Hansen, climate change



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**2018 - present, Argentina**  
 Biologist Esteban Servat, social struggles and environmental abuse



Vesna Marnjanovic

# scientist rebellion\_



