



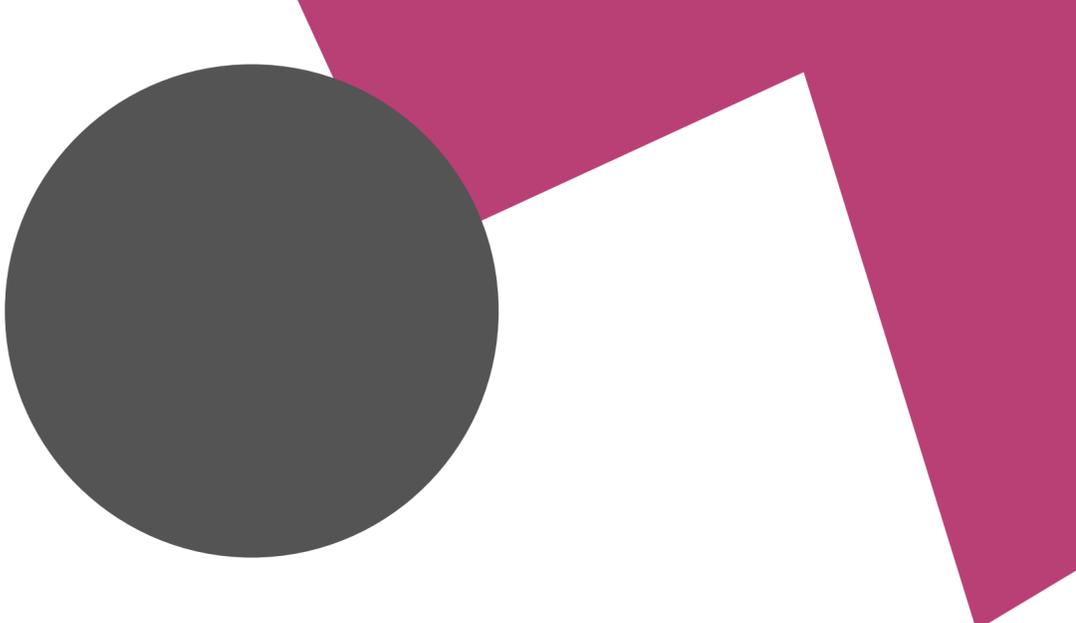
# Asia Pacific Youth IGF 2021 Virtual Camp

**REPORT**



PRESENTED BY NETMISSION & DOTASIA

# FOREWORD



Asia Pacific Youth IGF 2021 was held in conjunction with the [Asia Pacific Regional Internet Governance Forum](#) (APrIGF) from 17 to 20 September 2021 this year. [NetMission.Asia](#) organized and facilitated the event to raise awareness and build the capacity for youth to join the Internet governance discussions. Based on the mandate of IGF to bring people together from various stakeholder groups as equals, YIGF provides an open platform for the young generation to express and interchange their ideas and own thoughts on internet governance freely.

The yIGF is usually a 4-days-3-nights camp in which participants are assigned a role as one of the interest groups such as government, private sectors, and civil society organizations. During the camp, they are encouraged to think from a new standpoint and different perspectives. It also serves as a preparation camp for them to understand various internet issues via interactive activities & games as well as further directly participating in the local and global internet policy discussion platform.

This year, yIGF will be held as a 4-day virtual meeting with a series of virtual social meetups during the event week of yIGF 2021 and APrIGF 2021. Participants will be engaged in discussing hot issues related to Internet governance with other young talents from the region and experienced speakers from the IG community.

In this report, you will find out more about the input from participants at yIGF 2021. We hope to include opinions and suggestions from youth in the Asia Pacific region on a particular topic, in order to encourage more active participation and to allow the Internet governance community to project voice and views from the youth as contributions to the discussion at the regional and global Internet governance forums.

# ABOUT OUR ORGANIZER

**NetMission.Asia** is a network of passionate youth from Asia dedicated to engaging and empowering youth on Internet governance discourse with the aim to enhance youth mobility and create impact in Asia.

Students from top tertiary institutes or universities are recruited every year and will be provided with a series of training workshops. We are endeavoring to empower young minds and to constructively contribute to the local, regional and global Internet governance discourse through organizing the Hong Kong Youth Internet Governance Forum (HKyIGF), international conferences, and community projects.

NetMission Ambassadors are actively participating in various international Internet conferences, including ICANN meetings, IGF, APriGF, Asia Pacific Internet Governance Academy (APIGA), and the Asia Pacific Next Generation Camp (APNG Camp).

To support and encourage youth participation in Internet governance, the ambassadors have been organizing the yIGF in the Asia-Pacific region, including Singapore, Tokyo, Seoul, Delhi, Macao, Taipei, Bangkok, and Port Vila since 2010.

The NetY Program ([www.nety.asia](http://www.nety.asia)) was also initiated for further outreach to secondary school students from 2012 to 2014 by partnering with the Chinese YMCA of Hong Kong. In 2016, it was first marked as HKyIGF ([hk.yigf.asia](http://hk.yigf.asia)) followed by a 3-day-2-night camp and an Internet Summit with the same approach used in the yIGF model.



# CORE ELEMENTS OF YIGF

The yIGF is a platform for youth across the Asia-Pacific region to voice out their opinions on Internet Governance. To empower youth with relevant knowledge and capacity to participate in Internet governance discourse, we feature the following elements at our event this year:

## ROUNDTABLE DISCUSSION

All youth participants will be given the opportunity to explore hot topics, such as how the ramification of Internet hardware impacts geopolitics and what cryptocurrency is doing to our planet, with industry experts and young talents from the Asia Pacific.

The session aims to let participants deepen their understanding of issues that happen and actually affect their daily lives, and suggest possible solutions from a youth perspective. This session also aims to get participants ready for their participation in the Asia Pacific Region Internet Governance Forum (APrIGF) 2021.

## MEETUP WITH INDUSTRY EXPERTS

The policymaking process of the Internet governance world heavily depends on the multistakeholder participation model. To get our participants to better understand the ecosystem in our IG community, participants will be given the opportunity to meet with industry experts from different stakeholder groups, including government, civil society, technical community, academia, etc. This session aims to help participants to get a better idea of what and how different stakeholders deal with a particular issue during the policy-making process.

## DIALOGUE WITH THE APAC YOUTH LEADERS

In this session, youth leaders and representatives of different youth initiatives or Youth Internet Governance Forum (YIGF) from the Asia Pacific region will be gathered. It aims to facilitate a consistent conversation among the youth community in the region and keep the younger generation in the community informed about the Internet governance discourse that is going on in the region.

## YOUTH POLICY STATEMENT & PRESENTATION

Throughout the 4-day event, participants will be given chances to interact with industry experts and youth leaders from all around the world. Participants will form groups to do their group presentations by the end of the virtual camp, in order to bring out their opinions and possible policy suggestions on the theme of “Envisioning a sustainable internet for today and tomorrow”.

The ideas, examples, policies, or solutions suggested by participants through the roundtable discussion and their presentations will be recorded to establish a Youth Policy Statement. The statement will be included in the Report of yIGF 2021, which will be submitted to and published on the official site of the Internet Governance Forum by the United Nations.

## VIRTUAL SOCIAL MEETUP

We value the social elements of an event. To maximize our participants' experiences in yIGF 2021 Virtual Camp and APrIGF 2021, we will host a virtual social meetup during the event week of APrIGF 2021. We hope our community members could mingle with each other through both topics about Internet governance.

# PROGRAM AGENDA

## DAY 0 - 17 SEP (FRI)

TIME (UTC)	SESSION(S)
03:00-03:20	Introduction
03:20-03:30	Ice-breaking
03:30-04:10	<b>Workshop</b> - Basics of Internet governance & multi-stakeholder participation
04:10-04:20	Coffee break
04:20-05:20	<b>Meetup with industry experts</b> - Consumers' reliance on Internet & technology: Living the new normal
05:20-05:50	<b>Presentation Preparation</b> - Envisioning a sustainable Internet for today and tomorrow
05:50-06:00	Wrap up

## DAY 1 - 18 SEP (SAT)

TIME (UTC)	SESSION(S)
03:00-03:10	<b>Meetup with our supporting organization</b> - What does DotAsia do?
03:10-03:30	Ice-breaking
03:30-04:00	<b>Idea wall</b> - Get ready for APriGF: Inclusion, trust & sustainability
04:00-04:15	Coffee break
04:15-05:15	<b>Panel discussion</b> - Topic 1: Ramifications of Internet hardware on the environment and geopolitics <ul style="list-style-type: none"><li>• Md. Jahangir Hossein</li><li>• Che-Hoo Cheng</li><li>• Maheeshwara Kirindigoda</li></ul>
05:15-05:45	<b>Presentation preparation</b> (Topic 1)
05:45-06:00	Wrap up

## DAY 2 - 19 SEP (SUN)

TIME (UTC)	SESSION(S)
03:00-03:10	Ice-breaking
03:10-03:40	<b>Workshop</b> - What is APriGF?
03:40-04:00	<b>Introduction of Youth@Synthesis document</b>
04:00-04:15	Coffee break
04:15-05:15	<b>Panel discussion</b> - Topic 2: Is Cryptocurrency harming our planet? <ul style="list-style-type: none"><li>• Sky Lai</li><li>• Leonhard Weese</li><li>• Jesse Co</li></ul>
05:15-05:45	<b>Presentation preparation</b> (Topic 2)
05:50-06:00	Wrap up

## DAY 3 - 20 SEP (SUN)

TIME (UTC)	SESSION(S)
03:00-03:10	Ice-breaking
03:10-03:20	Program summary
03:20-04:10	<b>Participant Presentation:</b> Envisioning a sustainable internet for today and tomorrow
04:10-04:20	Coffee Break
04:20-05:20	<b>Dialogue with the APAC youth leaders</b> <ul style="list-style-type: none"><li>• Elliott Mann (Australia)</li><li>• Yulia Tikhonova &amp; Vlad Ivanets (Russia)</li><li>• Crystal Kewe (Papua apua New Guinea)</li></ul>
05:20-05:40	<b>What's your takeaway?</b>
05:40-06:00	Wrap up & Way-forward

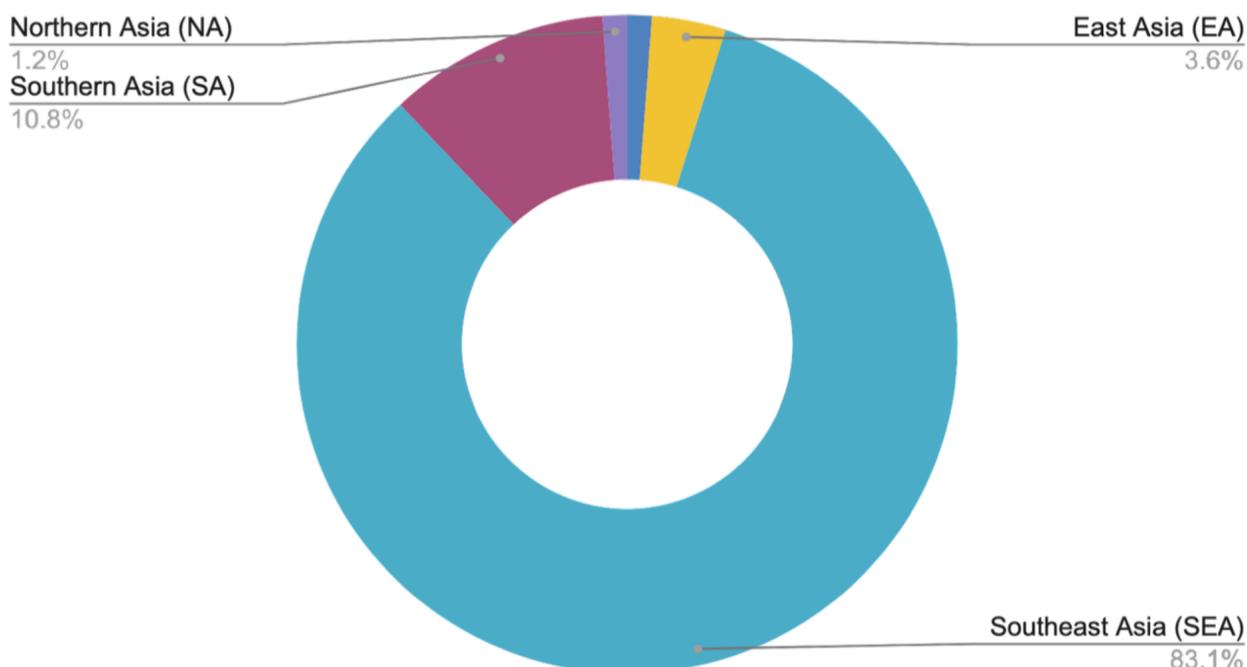
# HIGHLIGHTS OF YIGF 2021

This year, we have received 135 registration. Applicants of this year came from 19 territories in the Asia Pacific, namely Australia (1), Bangladesh (4), Brunei (1), Cambodia (1), China (1), Fiji (1), India (5), Malaysia (2), Myanmar (4), Nepal (4), Papua New Guinea (1), The Philippines (9), Pakistan (10), Russia (2), Sri Lanka (3), Taiwan (6), Thailand (3), Timor-Leste (1), and Vietnam (76).

According to our record, more than 70% of the applicants come from the Southeast Asia region. Followed by nearly 20% from Southern Asia. The rest is made up of around 5.2% from East Asia, 1.5% from Northern Asia, and 2.2% from the Pacific.

After the 4-day event, 83 youth participants have successfully completed the program by attending all sessions at the YIGF 2021. The overall attendance rate is over 78% with the highest attendance rate of more than 90% on Day 0. There were 56 females, 25 males, and 2 non-binary. Below is the chart that shows the regional diversity of participants who completed the 4-day program.

## Regional diversity of participants



The Asia Pacific YIGF 2021 emphasized innovation, collaboration, and engagement this year. In this 4-day event, we held 2 discussion panels and 2 collaborative sessions with 21 guest speakers invited, in order to help bridge the YIGF participants with community members and MSG members of the Asia Pacific Regional Internet Governance Forum (APrIGF). Additionally, by launching sessions with multilingual speakers and facilitators and interactive games in the sessions, we have encouraged higher attendance at YIGF and active participation at APrIGF.





# DAY 0: MEETUP WITH INDUSTRY EXPERTS

## Consumers' reliance on Internet & technology: Living the new normal

During this pandemic, the Internet has become the primary means to maintain our daily life. Concerns over fraud, cybercrime, security and privacy in cyberspace are rising. On the other hand, while technology and the Internet have encouraged more digital activities, people are starting to become more aware of how such activities might potentially harm our environment.

As much as society enjoys the convenience of the Internet and technology, not many have enough awareness of the costs that are incurred in enjoying such convenience. As we are living in the new normal, there are certain things that we should be aware of and one of them is to protect our planet which is no longer a new issue these days.

The format of the session started with a brief introduction by the moderator for 5 minutes. Shortly afterward, the participants were split into 5 groups (two English-speaking groups and three non-English-speaking groups) with the following lists:

- Group 1 (English-speaking) was joined by Anita Falconer from IP GO of APNIC and Anja Gengo from IGF Secretariat and facilitated by Jennifer Chung;
- Group 2 (English-speaking) was joined by Brent Carey and Jordan Carter from InternetNZ and facilitated by Felicia Yunike;
- Group 3 (English/Mandarin-speaking) was joined by Kenny Huang from TWNIC, Manju Chen and Margaret Hsu from NIEPA and facilitated by Edmon Chung;
- Group 4 (English/Hindi/Urdu-speaking) was joined by Amrita Choudhry from APriGF MSG and Satish Babu from ICANN APRALO and facilitated by Christine Or;
- Group 5 (English/Tagalog/Nepali-speaking) was joined by Aris Ignacio from Southville International School and Colleges and Ananda Gautam from Nepal IGF and facilitated by Bea Guevarra.

After splitting into 5 groups, each group discussed the following policy questions for 15 minutes in the first round of the breakout group discussion session. After that, all the participants were back to the main room and summarized the first round of the discussion. After presenting the summary of the first-round discussion, they were split into the same group and continued discussing the policy questions for another 15 minutes at the second round. After having a discussion, there was a 10-minute closing remark by Amrita Choudry, Vice-Chair of APriGF MSG.

### FORMAT

- INTRODUCTION [5 MINS]
- BREAKOUT GROUP - ROUND 1 (ENGLISH/ LOCAL LANGUAGE) [15 MINS]
- BREAKOUT GROUP - ROUND 2 (ENGLISH) [15 MINS]
- SUMMARY [15 MINS]
- GUEST SPEAKER REMARKS [10 MINS]

### POLICY QUESTIONS

- What kinds of policies should an organization develop to ensure their online and offline activities are creating negative impacts on the environment at the minimum level?
- What kind of infrastructure do we need to build in order to protect the environment despite the fact that the consumers progressively rely on the internet and technology?
- What are the things that we need to promote in having more reliance on the Internet, technology, and fighting for environmental protection?
- What are the ways to strike a balance between environmental conservation and the sustainable development of technology?

# Summary

The session of meetup with experts encourages all the participants to share their ideas and thoughts on how to manage every online activity in an environmentally friendly manner. Throughout the discussion, every participant was expected to think innovatively about how to conduct online activities without having to harm the environment. To facilitate the discussion, the organizers of this session invited several eligible speakers to encourage the participants to interact with the guest speakers intensively. The result of the discussion will be taken as a lesson learned for the participants to manage their online activities in an environmentally-friendly manner.

## Breakout group discussion summary

### GROUP 1

Environmental sustainability needs to involve various sectors instead of having a traditional sector underneath the umbrella of Internet Governance. Cooperation among stakeholders is the key to minimizing the negative impact of offline and online activities on the environment. Any kind of entity needs to efficiently use resources to minimize the impact on the environment by applying best practices in waste management and treatment as well as employee health.

### GROUP 2

The first step to take is to start measuring what the impact is, identify where the problems come from, and set our goal. Measures on environmental impact vary from country to country, unless they are bound by the convention. In terms of best practices, “The Shared Value Project” – a platform where any stakeholder can contribute to help businesses to meet the needs of consumers, or the principles of UNFCCC, including transparency, accuracy, completeness, consistency, and comparability should be followed. This does not only related to CSR not only socially, but also politically, economically, and environmentally.

The idea of PRICE – Privacy, Records, Information Security, Corporate Social Responsibility, and Environment (suggested by Brent Carey) is to minimize the negative impact of online and offline activities on the environment. Some activities nowadays can be carried out online which can minimize the carbon footprints.

Entities need to implement an early warning system and carry out a decentralized approach to Internet and security practices. Data can help mitigate harmful consequences especially related to natural disasters and carbon footprint. There are two main issues with data, namely data not collected or data collected but not properly utilized. One of the messages of IGF 2020 on environmental policy is that the Internet is decentralized and shall benefit the world. However, it could fail in the smaller part of the world. By the end of the session, a hypothesis is suggested, i.e. “how do we continue fostering face-to-face relationship and connection?”. In response, the group concluded that keeping the human connection online is something we are grappling with in the way we can keep going forward in a better way.

### GROUP 3

The group mostly discussed cryptocurrency during the session. They believe blockchain has a major impact on the economy and therefore, some sectors need to be incorporated based on Internet Governance because Internet Governance, in general, is more IT-oriented. Generally, cryptocurrency has its environmental issues in the form of high power consumption. However, the mining process such as proof of work for Bitcoin is necessary for the blockchain to maintain its decentralization. Therefore, to build a sustainable practice, Group 3 suggested that Internet Governance should be structured in a multi-disciplinary approach leading the policies to be more inclusive. Conversely, some participants viewed that we need to think of reducing travel for ICANN or IG meetings which potentially produce carbon footprints.

### GROUP 4

In the first round, Group 4 discussed the idea of green technology. Group 4 believes that sustainable development in technology is needed to protect the environment and control the carbon footprint of technology. Theoretically, sustainability involves ecology, ethics, and equity. Ecological footprint shall count the total energy used and dismantling of products.

One of the group members, Purnima, raised a question on how to minimize e-waste devices. The moderator suggested that policies and/or guidelines are needed on dumping and recycling e-waste that also includes the use of green technology. To maximize the idea of green technology, the group suggested the need for increased investment and research on finding or creating alternate materials that can be used for creating environmentally-friendly electronic devices.

### GROUP 5

In the first round, Group 5 suggested a hypothesis, “How do we dispose of old electronics?”. The Group suggested the implementation of the use of cloud and promoting the use of cloud such as students may submit digital copies of their work instead of using papers. Ananda added that some companies use solar power to eliminate carbon footprints and he believes that it is time for us to think of innovative ways how to reduce the use of electronic devices. Conversely, Aris Ignacio, the guest speaker, believes that the environment may also be related to a digital policy such as online hate creates a negative effect on the environment.

In the second round, some members suggested turning off WiFi if we don't use the device. Either way, find a place to properly dispose of electronic devices if the device is no longer functional or not used anymore. Staying away from the internet once in a while may help improve our mental health and environment. The group also suggested adapting to take initiative by promoting and raising awareness of the technology about the reliance on the internet. In conclusion, the group suggests that we need to build sustainable habits or adapt to a new lifestyle that is beneficial to the environment.

# TOPIC DISCUSSION 1

## Ramifications of Internet hardware on the environment and the geopolitics

The world has been moving steadily to be more connected over the internet. This is facilitated by submarine optic cables that run into thousands of kilometers. The race for technological dominance in attempts by nations to establish themselves as superpowers of the 21st century is evident as one observes the geopolitical advances made in laying submarine optic cable. Big guns such as Google and Facebook continue to dominate the infrastructure as disruptions are attempted by Chinese giants such as ZTE and Huawei. This has wide-ranging impacts on everything from geopolitics to trade. (Brake, D. 2019)

Despite its surveillance fear, the undersea cable project is a big business for the public and private sectors to consider. Depending on the distance between one country and another, the process of unloading the cable may take up one or two years to finish. If the unloading process was going smoothly, it would be a success but if the natural disaster or technical issue came up all of a sudden, it would extend the process and increase the cost. (Griffiths, 2021)

As the global demand on the internet increased, the use of undersea cable was highly suggested to ease the internet users' activities online. (Mauldin, A., 2021) The idea of building undersea cable may be the best way to solve the problem however, there are concerns about the environmental effect of extensive deployment of submarine optic fiber networks. This includes contamination, seabed disturbance, harm to organisms through visual, noise, and thermal disturbance. Likewise, in terms of political commitment, there are certain conventions that the concerned states shall abide by to protect the environment. (Griffiths, 2021) Therefore, this topic raises an issue on how we manage to meet our primary need for the internet but at the same time, minimize the effect on the use of the internet to conserve our planet.

Through this session, YIGF facilitated conversations on improving the understanding of the participants on ideas related to internet infrastructure, and the high stakes involved in them in the case of geopolitics and environment. The panel of experts delivered statements that fed the curiosity of the participants and engaged on matters of importance. The format of the session started with a brief introduction by the moderator for 5 minutes. This was followed by opening comments from the experts for 10 minutes each and then the floor was open for discussions on the policy questions and interaction with the participants for the next 25 minutes. This was followed by closing remarks from the speakers and the moderator.

The following were the speakers at the session.

1. Md. Jahangir Hossein, Sr. Manager, Data Communication Network BanglaTel Group
2. Che-Hoo Cheng, APNIC
3. Maheeshwara Kirindigoda, Central Province Governor's Media Secretary at Central Province Governor's Office, Sri Lanka

### FORMAT

- BRIEF INTRODUCTION [5 MINS]
- PANEL DISCUSSION [30 MINS]
- ROUND-TABLE DISCUSSION [20 MINS]
- WRAP-UP [5 MINS]

## POLICY QUESTIONS

- What are the implications of this optic fiber race on geopolitics?
- How can the Global South, with few submarine optic fiber players ensure that they are not left under-connected?
- Is there an environmental cost to expansive submarine fiber optics deployment? How can steps be taken to mitigate these?
- Politically tumultuous regions which are ecologically sensitive are affected in multiple ways? What are the potential solutions that can keep them connected while maintaining ecological balance?

The session was moderated by Sapni G K, a Netmission Ambassador from India.

In the opening remarks, our first speaker Mohammed Jahangir Hossein provided detailed context about the submarine cable infrastructure. He mentioned that there are 426 cable services around the world reaching almost a length of 1.2 million km in submarine cable service. This was necessary as there is a 40 % global bandwidth growth rate. He discussed the relevant international laws applicable in this context. He mentioned the two issues in the convention law which were dealt with by the UNCLOS, 1972 which demarcates 12 nautical miles from land as territorial sea and up to 200 nautical miles from land as Exclusive economic zones. He remarked that most of the cables are within this area and that major geopolitical issues can be mitigated by UNCLOS under international law.

Our second speaker, Che-Hoo Cheng, started his opening remarks by citing the case of the Government of the U.S. government stopping the laying of submarine cables in Hong Kong because of national security concerns and a worsening relationship with China. On the environmental front, he mentioned that the area affecting seabed is very less, hence it is a comparatively more sustainable and viable choice for providing internet connectivity.

Mahee Kirigonda, the last speaker, started by mentioning Facebook (now Meta) and Amazon's interest in creating a new submarine cable from the Philippines to California. He agreed to the points raised by the previous speakers on international law and the environmental consequences of submarine cables. He focused on the aspects of geopolitics as well as infrastructural terminologies. He also explained how cable-landing points and termination points play a key role in understanding the power play on submarine cables. He mentioned that Content Delivery Networks which are owned by US and EU companies control over 70% of submarine cables, wherefore developing and least developed countries must be varied and alert about the infrastructure they use. He made a case for more unity by setting the standards for the security of submarine cables and scrutiny into the powers holding the same. He also reiterated that the strength of the country plays a crucial role in the discussions and that there is always a trail that can be identified between the funding for the submarine cable and geopolitical implications.

Since the opening comments covered a lot of the first policy question, the discussion on the policy questions moved ahead with the second question on what the Global South can do. The speakers suggested that there must be adequate attention given to both private and public players in getting better connectivity for the global South. International cooperation and support from international organizations were also flagged as an important remedy. Continuous interaction and engagement were suggested as a solution for abating the issues in connectivity faced by the global south, to effectively mitigate geopolitical drawbacks.

The speakers pointed out the lack of availability of detailed resources on the environmental costs of submarine cables. They mentioned that there have been obvious instances of the deep sea and environmental damage due to submarine cables. They suggested that we must not ignore those concerns. They also suggested that best practices be developed to address these particular concerns, and further improved continuously to ensure minimal damage.

On the final question, the speakers referred to the suggestions on getting more financial aid towards the Global South. They mentioned that we should take into consideration our basic rights and long-term sustainability, which will help the ecological balance from the national and regional point of view to ensure politically and environmentally tumultuous regions do not bear an unreasonable burden.

The speakers also engaged in questions from the participants. They touched on the need to find the balance between the geopolitical concerns and the necessity of financial inputs from countries such as the USA which already have enormous geopolitical power. Balancing these conflicting interests might not be easy, but it is necessary. However, they suggested that the core values of every nation should drive how such balance is achieved. They suggested that driving policy on the submarine cable race must be met with the prism of security with reliance, robustness, and reliability. The speakers also touched on the necessity of striking a balance between the environment and the aspects of digital space while making progress on policymaking. They also touched upon using corporate social responsibility programs as a solution for ensuring companies address concerns of the environment amidst the work they do.

### Reference:

- Brake, D. (2019). Submarine Cables: Critical Infrastructure for Global Communications [Ebook] (p. 5). Information Technology & Innovation Foundation. Retrieved from <https://www2.itif.org/2019-submarine-cables.pdf>.
- Harb, R. (2021). Google and Facebook abandon Hong Kong landing of new submarine cable. Retrieved 29 July 2021, from [https://www.theregister.com/2020/08/31/google\\_facebook\\_drop\\_hong\\_kong\\_cable/](https://www.theregister.com/2020/08/31/google_facebook_drop_hong_kong_cable/).
- Griffiths, J. (2021). The global internet is powered by vast undersea cables. But they're vulnerable. Retrieved 29 July 2021, from <https://edition.cnn.com/2019/07/25/asia/internet-undersea-cables-intl-hnk/index.html>.
- Mauldin, A. (2021). Rising Tide: Content Providers' Investment in Submarine Cables Continues. Retrieved 29 July 2021, from <https://blog.telegeography.com/rising-tide-content-providers-investment-in-submarine-cables-continues>.

# Youth statement - Topic 1

In this section, you may find the youth statement that our participants come up with during the breakout group discussion session. Each group is given the role of one stakeholder group, including civil society, private sector, government, and technical community. Below is the youth statement proposed.

## CIVIAL SOCIETY

Contributors: Ngô Minh Thư, Keane Tolentino, Kaung Sat Naing, Nguyễn Bích Diệp (Diep Nguyen), Yashi Yadav, Thai Hoang Van Chi, Wu Cheng-Yuan, Lê Thị Hồng Thủy, Nguyen Thai Hoc, Nguyen Duy Phuoc, Vu Duc Hoa, Aung Linn

### Key Statement #1

The civil society as a collective should push and promote proper disposal and recycling of waste, support policy spaces and develop methods and tools for e-participation, and be more educated as individuals regarding the negative impacts of our online and offline activities on the environment.

### Key Statement #2

Infrastructures need to be built around the central idea of “eco-idea”, with a constant commitment to promoting sustainable environmental protection initiatives and contributing to a greener society by making use of sustainable and clean energy and involving the community in playing important roles.

### Key Statement #3

The civil society should push and promote trust between the society and ISPs, responsible device usage, purchasing, and manufacturing with maximized potential for repair/reuse and the use of Mobile Big Data to lean more towards reliance on the internet and technology while fighting for environmental protection.

### Key Statement #4

To strike a balance between environmental conservation and the sustainable development of technology, civil society should adopt a smarter and more mindful lifestyle, develop renewable energy technology to sustainably generate energy, and push for scalable and sustainable innovation and invention.

## GOVERNMENT

Contributors: Tuyet Nhi, Thi Nguyen, Dao Nguyen Tien, Mac Andre Arboleda Hajar, Duong Binh Minh, Churairat Dangphungpaiboon, Yen Chien Lai, Thuan Truong Quang

### Key Statement #1

CSR (Cooperate Social Responsibility) must be mandatory. Governments should lead corporations with proactive policies in eliminating environmental issues and reducing carbon footprint.

### Key Statement #2

Establish laws and regulations that require enterprises to deduct amount money from their revenue to carry out activities that help to protect the environment.

Governments can collaborate with agencies to conduct creative campaigns to raise awareness and educate the enterprises on the need for environmental conservation.

### Key Statement #3

Government should support research on environmental impact, politics, and management of cables and encourage competition to avoid submarine cables being monopolized.

## PRIVATE SECTOR

Contributors: Le Cong Anh, Mai Thao Nhi, Sadikshya Maharjan, Bipana Dhakal, Cuong Nguyen, Nguyen Thi Khanh Linh, Dang My Thuy Tien, Duong Binh Minh, Nguyen Thi Anh Tu, Natasja Padilla, Mikyla Gallego, Nguyen Thi Quynh Mai, Purnima Tiwari

### Key Statement #1

Establishing policies regarding environmentally-friendly business code of conduct, to provide clear guidelines on the resources or materials of hardware or devices used for the business.

### Key Statement #2

Promoting Corporate Social Responsibility by introducing a platform to nurture awareness and digital literacy from all aspects in the private sector. This should be supported by the government sector by proper facilitation.

### Key Statement #3

Adopting the usage of both reserve currencies and cryptocurrency for transactions, to balance the impacts of carbon footprint and the loopholes of security issues.

## TECHNICAL COMMUNITY

Contributors: Daria Stepovaya, Jayden Nguyen, Siriracha Kaeoyong, Aubrey Bantolo, Yassir Mahmoud, Nguyen Tra My, Vo Ho Khanh An, Thu Phuong Hoang, Nguyen Phuong Thuy, Ngoc Diep Nguyen, Porchou Ear, Linh Pham

### Key Statement #1

Creating green domains to raise users' awareness about environmental issues, encourage people to donate to environmental projects like Ecosia. Promoting understanding of digital devices and educating the general public about environmental conservation and the sustainable development of technology.

### Key Statement #2

Using technical solutions and enhancing the use of sustainable energy to ensure that countries or businesses follow the rules and minimize their negative effect on the environment.

### Key Statement #3

Developing a universal framework that states the use of minimum appropriate materials, and restricts the infrastructure installation of submarine cables, to minimize harm to all marine creatures. A reporting system should be established, in case there is any incident that may harm the environment, infrastructure providers must immediately notify the local authorities and work with them to deal with the consequences.

# TOPIC DISCUSSION 2

## Is Cryptocurrency harming our planet?

As financial technology becomes more accessible, ultimately making our lives easier, certain components of fintech cause long-term harm to our health and the environment around us (Thompson, 2020). One example that has changed society is Crypto Mining, however, crypto miners generate currency through an energy-intensive process that demands massive computing resources. (Reiff, 2021) Since no government body or organization officially tracks where bitcoin is being mined and what type of electricity miners are using, there is no way of knowing whether miners are using electricity that is fueled by renewable energy or fossil fuels. (Aratani, 2021)

Bitcoin, one of the well-known types of cryptocurrency, was recorded to be using 121 Terawatt-hours of electricity every year in the BBC report 2021. In addition to energy consumption, crypto mining generates a significant amount of e-waste every year. (Reiff, 2021) According to Digiconomist, the bitcoin network generates between eight and 12 thousand tons of electronic waste every year. Some argue that the energy consumption of Bitcoin comes from renewable sources, but the calculations of Bitcoin's renewable energy usage are still controversial. (Reiff, 2021) Mining profits depend heavily on electricity costs regardless, and it might impact our environment in certain ways.

Therefore, in the panel discussion on Day 2, we have invited 3 speakers, including Sky Lai – influencer: Invest Man, Leonhard Weese from Bitcoin Association of Hong Kong, and Jesse Co from Blockchain Solution, to explore and discuss this issue with us.

The moderator, Bea Guevarra, first began the session with a 5-minute introduction on the agenda and the background of the topic, which gave a context and provide a ground for discussion on the following policy questions:

The first speaker, Leonhard Weese from the Bitcoin Association of Hong Kong, pointed out that he expected we can evaluate Bitcoin, not solely based on its energy consumption, but from the source of the energy and the ways it is generated. This is already a sufficient argument to be justified if Bitcoin is harmful to the environment.

He reassures us that the energy consumption of Bitcoin mining is more or less equal to the value of Bitcoin generated and rewarded in every block. However, we could not conclude that the energy consumption of Bitcoin mining must be way higher than now in 10 years. It depends on the value of Bitcoin in 10 years and how much transaction fees people are willing to pay.

He pointed out that the nature of Bitcoin mining is like a lottery. To participate in this lottery, cheap electricity is needed. Weese pointed out that non-renewable energy like coal- or gas-burning is relatively more expensive than renewable energy like hydroelectric power for Bitcoin mining. But due to geographical limitations of certain renewable energy, it is usually far away from the cities or industrial centers. Weese also raised an example of some middle-east countries with rich oil resources but unable to sell them to other countries are burning the oils for nothing. People would argue that the resources could be used for something more productive than Bitcoin mining indeed.

Weese brought up a positive example of Bitcoin becoming an official currency in El Salvador, and how this step helps people who do not have a bank account in that country to make electronic transactions and live in this digital world that requires a lot of internet or digital activities more effectively. This also encourages people to keep transactions online which reduces the need for physical traveling to complete tasks that can be completed online, such as paying bills or transferring money, in the future.

The second speaker, Sky Lai, delivered his sharing on whether he believes cryptocurrency is going to harm our planet from an environmentally-friendly perspective. Lai mainly shared some facts and statistics that are objective enough for the audience to decide whether or not cryptocurrency is harmful to the environment. One of the data shows that if Bitcoin were a country, its annual consumption would be similar to a mid-sized country like Argentina.

Lai also mentioned that, according to the Bitcoin Mining Network report by CoinShares, more than 70% of Bitcoin mining uses renewable energy. He believes that usage of renewable energy for mining will be the trend of the crypto world.

### Reference

- Aratani, L. (2021, February 27). Electricity needed to mine bitcoin is more than used by 'entire countries'. The Guardian. Retrieved July 15, 2021, from <https://www.theguardian.com/technology/2021/feb/27/bitcoin-mining-electricity-use-environmental-impact>.
- Cholteeva, Y. (2021, June 25). Bitcoin and renewables: is cryptocurrency mining problematic? Power Technology. Retrieved August 4, 2021, from <https://www.power-technology.com/features/bitcoin-and-renewables-is-cryptocurrency-mining-problematic/>.
- Criddle, C. (2021, February 10). Bitcoin consumes 'more electricity than Argentina'. BBC News. Retrieved July 20, 2021, from <https://www.bbc.com/news/technology-56012952>.
- Cuen, L. (2021, March 21). The debate about cryptocurrency and energy consumption. Tech Crunch. Retrieved August 4, 2021, from <https://techcrunch.com/2021/03/21/the-debate-about-cryptocurrency-and-energy-consumption/>.
- Reiff, N. (2021, May 13). What's the Environmental Impact of Cryptocurrency? Investopedia. Retrieved July 15, 2021, from <https://www.investopedia.com/tech/whats-environmental-impact-cryptocurrency/>.
- Thompson, B. (2020, May 11). How cryptocurrency damages the planet. Green Prophet. Retrieved July 15, 2021, from <https://www.greenprophet.com/2020/05/no-way-around-it-the-irreparable-damage-cryptocurrency-does-to-the-environment/>.

# POLICY QUESTIONS

- How important is bitcoin in the digital era?
- How do we minimize the risk of global warming when transacting bitcoin?
- What if we replaced all the world's currency and central bank transactions with cryptocurrency, what would have less impact on the environment? And what would be the difference?
- Should there be a regulation of cryptocurrency usage per country? How do we suggest the lawmaker in regulating bitcoin transactions?
- Are there any alternative cryptocurrencies that don't spend so much computing power and energy?

## FORMAT

- BRIEF INTRODUCTION [5 MINS]
- PANEL DISCUSSION [30 MINS]
- ROUND-TABLE DISCUSSION [20 MINS]
- WRAP-UP [5 MINS]

The last speaker, Jesse Co, who has been a miner himself, shares that cryptocurrency is a huge trend that won't be stopping any time soon. He agrees that miners are more environmentally conscious than the general public believes and that they are the ones pushing the renewable energy initiative forward because renewable energy is the most cost-effective resource. Most miners in North America are relocating to areas with abundant water, such as Washington state and parts of Canada, where hydropower is the most cost-effective. He claims that bitcoin is here to stay and that bitcoin will continue to be used as a store of value as the rest of the networks strive to consume less energy.

His experience as a miner indicated that he would spend more money on electricity than bitcoin output, especially given the uncertainty of bitcoin prices. He confirms that mining drives the use of renewable energy because it is the most cost-effective; miners are energy-conscious and will most likely use renewable resources.

To continue the discussion, the participants had a handful of questions to ask the speakers. One question asked: What about the e-waste which is generated by the mining process? Leo shares that the past e-waste problem of mining was mainly during the generation of the chips. He states that in the next five years, the tech world will have reached the physical limit of what these chips can do. That in the future, there will be no need to replace chips as frequently, with these chips lasting decades or longer than other equipment. Jesse agrees that there will be a certain threshold but on a micro-level, he believes mining equipment lasts longer than most people believe. He claims that the crypto world's e-waste is no different from that of computers, and that recycling policies exist within countries. But clearly emphasizes that there is mitigation but is still a problem.

The next question asks if dogecoin is in for a long term in cryptocurrency industries, could it be a way to minimize the environmental impact? The speakers all respond by saying that dogecoin does not differ from bitcoin in any way. Leo's main point was which platform are people building upon and which one will people eventually gravitate to. If payment and value gravitate to a single coin there would be less usage and less energy consumption. Jesse adds that he does not see dogecoin existing in the next 5 years. On the other hand, Sky mentions if the dogecoin can gain trust and community consensus, it can become something in the future.

The following question stated if the speakers think the management of bitcoin will centralize in the future? Leo positively answers saying that the development looks good in terms of decentralization. After China kicked bitcoin miners out, it became a positive step for decentralization of bitcoin, since 60% of mining was done in a single country. The operation is becoming greener, cleaner, and more distributed around the world. He also adds how individuals are joining the bitcoin development and actively taking tasks to create protocols. As well as more companies coming into the space, there is no longer a single market that dominates the price of bitcoin. Jesse's only concerns were on block stream, the main programming team behind bitcoin, but agrees that bitcoin will not centralize.

The succeeding query emphasized how people only know about bitcoin but not much about energy-efficient ones like Bitgreen and Ripple. Should there be laws to regulate usage and encourage the development of green cryptocurrency for sustainable fintech? Jesse shares that one must understand the decentralized nature of cryptocurrency, which no government can regulate. The only way to drive the crypto-network to go green is the stakeholders pushing the community to go green. Leo suggests considering security - there is a security aspect, security costs money and resources always mean energy. He gives a comparison with existing systems like banks, they do need to use energy to secure their systems to build walls and to have security guards. As for cryptocurrency, it can be either not secured or need to spend energy elsewhere - but this has yet to be tested as they have not demonstrated it, especially as they grow to secure networks without using any electricity. For the final question, the speakers were asked, How do they think NFTs will affect cryptocurrency in the future? Jesse is a believer in NFTs and says that it has brought a lot of mainstream attention to the blockchain world. He expressed that NFTs put the value back into digital media and will make the adoption of cryptocurrency easier.

The speakers concluded the session by stating that everyone should understand the decentralized world of cryptocurrency and move away from the traditions of those in power, such as governments and organizations. They both encourage the audience to keep learning and using these tools as a means of determining whether these tools will have a positive or negative impact in the future.

# Youth statement - Topic 2

In this section, you may find the youth statement that our participants come up with during the breakout group discussion session. Each group is given the role of one stakeholder group, including civil society, private sector, government, and technical community. Below is the youth statement proposed.

## CIVIL SOCIETY

Contributors: Churairat Dangphungpaiboon, Siriracha Kaeoyong, Nguyen Duy Phuoc, Vu Duc Hoa, Nguyễn Bích Diệp (Diep Nguyen), Kaung Sat Naing, Nguyen Thanh Thuy Trang, Lê Thị Hồng Thủy (Thuy Le), Thu Phuong Hoang, Natasja Padilla, Ngoc Diep Nguyen, Wu Cheng Yuan

Energy should come from new and renewable sources such as solar energy, wind energy, and hydroelectric energy. Governments should intervene to regulate in order to reduce fuel consumption and emissions and therefore, to achieve sustainable development.

The cryptocurrency should be “partly” controlled by the government because if there were any intervention from the government, the inflation in the real currency would take place.

Miners can propel their mining process when Bitcoin is at a high value. On the contrary, when the price goes down, they can just sell their surplus polar energy.

SolarCoin— encourages people to use solar mining by the rewards of virtual currency.

## GOVERNMENT

Contributors: Keane Tolentino, Vo Ho Khanh An, Linh Pham, Yashi Yadav, Daria Stepovaya, Nguyen Thai Hoc, Mac Andre Arboleda, Jayden Nguyen

Governments should monitor the development of cryptocurrency. However, they should allow cryptocurrency as an alternative to government-recognized financial institutions and systems to promote the inclusion of those who simply do not have access to financial services. As a government, minimizing global warming could be done by supporting green tech initiatives, and supporting research on the environmental harms of these emerging technologies. Governments should tackle issues at a regional or international scale to create universal standards and frameworks.

## DIALOGUE WITH THE APAC YOUTH LEADERS

After three days of absorbing new knowledge from various speakers from around the region, Youth leaders from APAC share their experiences in the IG Community and what they have been doing locally in their respective countries on the final day of the yIGF. The moderator, Jenna Fung, first began the session with a 5-minute introduction on the agenda and shared a brief introduction of each speaker.

Bronwyn Mercer and Elliott Mann, both from Australia, were the first to speak about their experiences. Bronwyn, the chair of NetThing, has a Bachelor's Degree in Information Technology and explained how she was never really exposed to Internet Governance during her time in college. Not until she came across a Facebook page that advertised an all-expenses-paid trip to Geneva, Switzerland for the IGF 2017. This led her to join the Internet Society Fellowship, which allowed her to meet new people from all over the world and learn more about what Internet Governance is like from different perspectives. Being selected as one of the thirty youths and joining IGF 2017 she discovered so many new issues that surrounded the Internet which opened her eyes to all the different opportunities to be more involved in this world of IG. There was no local IGF in her country at the time, so she took the initiative to find a diverse group of people to launch the Australian IGF in 2019. She strives for diverse representation in her local IGF, where everyone, especially the youth, feels included in the conversation. She shared about NetThing, where she and Elliott ran a session on “Intro to Internet Governance”, they made sure that young people were invited. She emphasizes that her goal is to see more young people integrated into the sessions at NetThing, as actual youth experts and until more youth can create their sessions. Rather than being bystanders or attendees. She envisions more youth driving the content of NetThing with having the opportunity to lead.

As for Elliott, he shared a similar experience how he studied Law and Computer Science, had a few ideas on DNS but had little to no idea of what goes beyond the ecosystem of the Internet. He was introduced to the IG Community through one of his law professors, who invited him to join the ICANN NextGen program. He explained that during his first ICANN Meeting, he had no idea what was going on, especially with the number of abbreviations mentioned and being completely intimidated by the number of experts present. Despite being overwhelmed by the new information, he thoroughly enjoyed it and continued to participate in programs such as APIGA and the IGF 2019 in Berlin shortly after. While participating in such events, one issue that he kept thinking about was the lack of youth representation at these events. He talks about how he and Bronwyn want to bring more youth into the Australian IGF, and how he wants others to recognize that there are areas where young people are experts and that young people can be the best and most diverse at certain times.

For the next speaker, Yulia Tikhonova from Russia is a member of the Youth Council at the Coordination Center for TLD .RU. This organization provides high-quality and accessible domain name registration services including safe use of the internet to expand internet use to Russian internet users. She discusses youth-focused projects such as the “Internet Governance Summer School” and as well as a discussion club called “Digital Reality”. This club discusses the different issues in the digital world like cybersecurity digital ids, and so on. Yulia was one of the first participants to join the summer school program, and it was one of her first steps toward learning more about the IG World. She continues by mentioning how in the Youth Council she helps prepare others for the International forums such as Youth IGF, which she became one of the lead Youth Voices. Her role is to raise the voices of the youth and discuss the issues that happen in her country to the world. She also mentions the International Telecommunication Union Regional Office for CIS Region how the youth are preparing a document that would be presented at this conference. She hopes more youth can be prepared and informed of the many forums that they can join.

Crystal Kewe from Papua New Guinea, the final speaker explains how she is still new to the Internet Governance world. It was only in the past few months was she got introduced to APriGF. Prior to that, she has been working as a software engineer for the past 3 years, and she mentions how she chose to forego traditional education in order to pursue her passion for computer science and software engineering, which she has admired since she was ten years old. She explains that in her country, there are no acceleration paths for children who are gifted in specific subjects. She realized she was far ahead of her peers in school and decided to put school on hold and to tell her father she wanted to pursue her passion when she was fifteen years old. Her first idea was to start a video game company, but her father explained that would be a great idea if she lived in Australia or New Zealand; instead, he suggested starting a startup software company that develops applications for PNG businesses. She formed a partnership with her father, focusing on the technical side while he focused on the business side, to form their company Crysan Technology Ltd. She continued to educate herself in order to take on more difficult projects, eventually rising to the position of CEO in 2019. Crystal hopes to establish a software engineering academy in her country to educate young graduates. She also shared that most of her work revolves around applications that run using the web and that cybersecurity is one of the priorities for her company. She points out that the systems that they create should have great accessibility and usability because if both of those do not apply; a system is useless despite the complexity behind it.

After all the speaker's motivational remarks, Jenna opens the floor for the participants to share their questions with the speakers. One of the first questions asked was how the speakers felt about the environmental aspects related to internet governance. Bronwyn mentions how the topic of the environment has not been traditionally discussed in the IG Forums but now there is an increasing awareness of the importance of managing sustainability and the environmental impacts of technology and making sure that the use of technology is not impacting the environment around us. But she does believe that it is important to think about the different equipment, such as routers, switches, data centers, etc. How are those contributing to climate change, with electricity usage, and the greenhouse effect? Another question was followed, asking “Is there technical code related to hardware or infrastructure when creating policies for the Internet?” Elliott shares how this can be related to internal combustion engines in cars. How emissions on those are constantly pushed to come down and he hopes to see the same when designing a data center, where stricter standards should be imposed. Bronwyn adds that the International Standards Organization (ISO) would probably set those standards. Organizations should consider certain requirements when putting together technology and/or a system. She has no doubt that the ISO would have some standards relating to the environment and technology.

The final question was for Crystal, a participant asked about the Covid-19 Situation in PNG and how it has affected children's education, particularly with the difficulty of accessing the Internet, and whether PNG has developed many solutions to this problem. Crystal responds by saying how it has been a challenge that has affected a lot of people in the country. PNG had a hub to host APriGF, and topics on having online educational materials for institutions were a big discussion as well as focusing on accessibility with people with disabilities. She expresses that there is still no government-wide solution, however, different educational institutions and public corporate firms are looking to provide training for their employees, especially with the set up of working at home. Many organizations are reaching out to companies like Crystal's because of their expertise in developing mobile-based learning management systems. She also mentions, despite there being interest and people exploring these different tools to help. There is no technical expertise in the country to help design, develop, administer, set up, and maintain those systems. Though there are still some small firms that can help, in PNG infrastructure, connectivity and digital devices accessibility are very different compared to their neighboring countries. She shares that she is very privileged to have grown up in a household connected to the internet and was able to learn and use it wisely, but unfortunately, there are those who did not get to share the same experiences. She hopes to collaborate with other countries and have an IGF forum for the Youth in her country to continue and share more discussions like this.

To wrap up the session, Jenna asks the speakers what the participants could do to help and to contribute to the community in the Asia Pacific. One of Yulia's project's goals, she says, is to promote digital literacy among everyone, especially the younger generation. Her organization has done a lot to provide media coverage on digital issues and promote quality information to aid countries in their digital transformation. She believes that the experiences of the youth today can be both helpful locally and internationally and to continue to discuss and communicate with one another. As for Bronwyn, she states that “You are much more powerful when you work with other people... It's important to have connections and to work with other people to make an impact.” She says that it will really make a difference within the region to make connections in the future and to build youth representation all around the Asia Pacific. Crystal affirms that collaboration and learning from one another are essential. She also tells the audience that there should be more discussion about the importance of Internet education, which should be inclusive and diverse. She hopes to continue to use her platform to educate and empower young people on how to use the Internet responsibly. Finally, Elliott points out that building a sustainable Internet does not have to be a top-down process; rather, smaller steps should be taken from the bottom up. He ends his statement by saying “Do not forget the power of the individual.” Jenna hopes that by the end of the session, all of the attendees will be inspired to start their own initiatives in their own countries to ensure a sustainable Internet for today and tomorrow.

Speakers:  
Elliott Mann (Australia)  
Yulia Tikhonova & Vlad Ivanets (Russia)  
Crystal Kewe (Papua New Guinea)