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Conference Proceedings

HSDNI's 8th Sustainability Collaborative Conference – 2024

12th and 13th June 2024

Toronto Metropolitan University

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Introduction

HSDNI at Toronto Metropolitan University hosted the 8th HSDNI's Sustainability Collaborative Conference-2024. The collaborative partners are Department of EnSciMan, Toronto Metropolitan University, Access Alliance Multicultural Health and Community Services, Tamil Canadian Centre for Civic Action and Bangladeshi-Canadian Community Services (BCS).

HSDN International is a non-profit organization that has been operating with the goal of raising awareness and promoting practical models for sustainable development through cooperation and collaboration and in doing so, striving to reconcile economic growth with environmental interests and the protection of unique societal practices, cultures, and traditions. We have been organizing all over outreach activities on sustainability to share the experiences, find out the challenges, and facilitate follow-up plans for a better society.

This year, diverse stakeholders, scholars, experienced people and social workers from around the world participated in the conference held on 12th and 13th of June at Toronto Metropolitan University.

The theme of the year: Inclusion and Diversity for Sustainable Society.

The conference focused on the impacts, prospects, issues, causes, and challenges of cosmopolitan and multicultural societies and how to deal with and facilitate diversity for inclusion to prevent inequality and violence.

Sub-theme of the year:

1. Food Insecurity
2. Good Governance
3. Global Public Health
4. Gender and Race Inequality & Violence

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Day 1

Opening Remarks: Importance of Storytelling

Presented by: Andrew Laursen

Conference proceedings: Shruthi Anna Thomas

Social scientists need to develop knowledge base and skills to progress. Equally important is to build capacity to serve as bridges who can connect social sciences with good policy, and policy with community and be able to convey the right stories that can spur positive action.

Looking at this concept through the lens of climate change conversations happening all around the world currently - leading news outlet articles in Denmark, the US, and Canada.

Denmark is consistently ranked in the top three in terms of countries that are on target for meeting climate change objectives. Popular news outlets put the readers as part of the story (human-centered). They do not use extreme language, they convey information and offer readers solutions.

In contrast, news outlets in the US - have strong language, and offer some solutions but mostly convey messaging around damage control and late action. Headlines are about the facts, reporting starkly the status of conditions without putting people in the story. In Canada, the conversations are more ambivalent by taking opposing stances regarding the urgency for advocacy and action on climate change. Neither of the perspectives in the US or Canada are productive.

The concept of storytelling translates whether we are talking about climate change, racism, or global public health. American Public Health Administration's climate change storytelling website states - “Stories make climate change relatable by drawing on common experience and core human values. Compelling stories generate empathy and understanding. It takes listeners on an emotional journey and offers a sense of hope that inspires change.”

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To summarize the guidelines for storytelling:

- There is power in personal stories, in personal narratives.
- The guiding principle in the story should be 'people first'. And 'people first' needs to be inclusive.
- There is a need to recognize values and connect them to the values of the audience.
- There is a need to address ambivalence - show the audience that action is needed, doable, and worthwhile while recognizing and addressing fear, confusion, and apathy.
- And ultimately, to offer a solution attached, that can move us forward in a Classic Narrative Arc.

The Classic Narrative Arc as adopted from Cheryl Brumley's "Stepping out of the academic box" Geographical Society Annual Conference, 2014 lists its different steps as Exposition, Rising Action, Climax, Falling Action, and Resolution.

Dr. Andrew Laursen, Graduate Program Director, Environmental Applied Science and Management, Toronto Metropolitan University

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Session 1: Racism and Discrimination

Keynote Speech: Gender-Based Violence (GBV): A Silent Pandemic Within A Pandemic

Presented by: Dinoba Kirupa, MPPGA

Conference proceedings: Helin Isik

Dinoba Kirupa opened the session by acknowledging the potential triggering nature of the topic, emphasizing the importance of self-care. She also noted that while men can experience gender-based violence (GBV), her research focuses exclusively on women.

Dinoba Kirupa, a dedicated advocate working in the Violence Against Women (VAW) sector, shared her personal motivation for addressing GBV, inspired by the experiences of women she knows, including her grandmother. These stories, though personal, reflect a broader, pervasive issue both in Canada and globally.

The Canadian government defines GBV as violence experienced due to one's gender, gender expression, gender identity, or perceived gender. It is recognized as a violation of human rights.

Dinoba outlined various forms of GBV, highlighting the diversity in experiences and the types of abuse that can occur which are; physical abuse, financial abuse, psychological/emotional abuse, sexual abuse, technological abuse, and spiritual abuse.

She addressed the complex reasons why survivors may not leave abusive situations or seek help. The first one is stigma where societal and familial expectations often pressure survivors to keep families intact, despite the personal cost. The second one she mentioned was police involvement. The fear of police, concerns about needing physical evidence, and cultural insensitivity can deter survivors from seeking law enforcement assistance. Restrictive measures like restraining orders are often reactive rather than preventive. The last one mentioned was service delivery providers; limited funding, working in silos, and cultural insensitivity among service providers can hinder effective support for survivors.

Dinoba highlighted the importance of cultural sensitivity in addressing GBV, referencing Bennett's six stages of intercultural sensitivity: denial, defense, minimization, acceptance, adaptation, and integration. She explains denial as a lack of recognition of cultural differences. Defense is described as recognizing these differences but viewing them negatively. Minimization involves an awareness of differences, yet a belief in in the superiority of one's own culture. Acceptance signifies an understanding and a desire to learn about cultural differences. Adaptation is characterized by the ability to communicate effectively with other cultures. Finally, integration is defined as the competency in understanding and empathizing with other cultural frames of reference.

Dinoba discussed the unique challenges faced by immigrant survivors of GBV. Many survivors' immigration status is tied to their abuser, making them vulnerable to threats of deportation. She also mentioned how South Asian international students are targeted for abuse, as they often lack knowledge of local laws and supports, making them susceptible to exploitation and abuse. This demographic faces increased risks of suicide and addiction due to these pressures. She showed this YouTube video on the topic of sexual abuse suffered by South Asian Students in Canada.

The session also covered the impact of toxic masculinity on both men and women, defined by harmful behaviors and attitudes that reinforce negative power dynamics. Dinoba referenced the work of Jeff Perera and others in highlighting how racialized men may face additional pressures to conform to hyper-masculine behaviors.

Dinoba concluded with a return to her grandmother's story, framing survivors of GBV as warriors. She emphasized the need for continued progress and support for these individuals, recognizing their strength and resilience.

For more information on CASSA's GBV study, please visit CASSA's GBV Study.

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Presentation 1: Empowering Youth for Sustainable Community Building- Lessons from The Resilient Youth for Change Project

Presented by: Mahbub Hasan, Urbi Khan and Anuva Hasan

Conference proceedings: Karen Lobo

Background: Covid- 19 disproportionately affected the racialized communities, having adversely affected their education and economic situation. Racism significantly increased during the pandemic, further marginalizing racialized youth. The resilient youth for change is a community-based project and is a transformative initiative in Toronto that aims to empower and uplift racialized youth from racialized communities, fostering inclusivity and social entrepreneurship.

Methodology: The project took place between the months of July 2023 to March 2024 supporting 60 youth between the ages of 15 to 30. The project was implemented by the Bangladeshi Canadian Community Services (BCS) and funded by the Canada Service Corps. The project used a blend of both qualitative and quantitative methods for data collection. Data was collected in the form of surveys, focus group discussions and case studies in targeted areas such as mental health support, financial literacy, social entrepreneurship and community development. The project was based on personal advocacy and leadership for the youth so that they can develop entrepreneurial skills. Career and employment counseling was also provided as well as mental health and well-being support to have a holistic approach on the youth, to give them more confidence and skills in order to achieve their goals. The participants that were 30 years old were able to mentor the younger participants creating a more approachable environment. A leadership module was developed and a series of workshops were taken for the youth that included topics such as anti-racism and anti- oppression training, stress management training, grant writing training, project management training, social anxiety and coping strategies training, financial literacy and banking training, social enterprise training, story writing training, mental health retreats and community organizing and engagement sessions. A micro-grant of up to $5000 was provided to the participants which enabled them to initiate and execute their ideas. The youth fellow journey was curated to track the progress of the study youth. The journey starts with the agreement signing, flowered by the

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completion of the leadership module, submitting a proposal for the micro- grant project, implementing the micro-grant project with the community, participating in the social media campaign and finally dialogue meeting with the policy makers. At the dialogue meeting the youth were able to share what they learned and their findings. These sessions facilitated open discussions between participants and officials from the Employment and social development Canada (ESDC) to address concerns, share insights and seek solutions.

Results: During the project evaluation, the team received survey responses from 35 participants. Out of these respondents, 22 (63%) identified as female, 13 identified as male (37%). In terms of age, 9 participants were between 15-17 years old, 11 were between 18-19 years old, 10 were between 20-24 years old, 5 were between 25-30 years old. Ethnicity-wise, 33 (94%) respondents identified as South Asian, 1 identified as Middle eastern and 1 as Central Asian. Rate of effectiveness of mental health support provided during the project in addressing stress and anxiety caused during covid, 18 out of 35 (51.4%) reported extremely effective, no one reported not effective at all. Rate of knowledge gained in financial literacy, social enterprise and grant writing through the project activities, 24 out of 35 (68.6%) reported being very high, no one reported being very low. Rate of usefulness of the career, employment and higher education counseling received during the project, 18 out of 33 (54.5%) reported being extremely useful. No one reported being not useful at all. Rate of how beneficial were the anti-racism, community organizing, leadership and campaign training sessions, 28 out of 35 (80%) reported being extremely beneficial. No one reported being not beneficial at all. Rate of level of engagement and satisfaction with the town hall/ dialogue meetings attended with Bureaucrats, MP, MPP, City Councillors, 16 out of 35 (45.7%) reported being very high. 35 surveyed youths reported supporting 810 community members, indicating a broader impact than anticipated. Community members were engaged and educated by these 60 youths on critical topics such as anti-racism, mental health, environmental awareness, and community building initiatives. The micro-grant projects provided essential resources like food and education on nutrition and well-being, further supporting the community. Moreover, empowering youths to invest a portion of their micro grants in higher education, professional training, and business development enhanced their long-term prospects and community impact. The project successfully exceeded its initial goal by supporting 60 racialized youths

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aged 15 to 30. Various outreach efforts, including distributing flyers, hosting information sessions, and engaging in social media promotion, led to significant community interest and engagement. The participants gained skills in advocacy, leadership, stress management, financial literacy, social entrepreneurship, and project management, empowering them to drive positive change in their communities. Increased engagement in community organizing, campaigns, and dialogue sessions with government officials, fostering a sense of community involvement and collaboration. Development and implementation of 60 youth-led projects addressing various social issues such as racism, discrimination, mental health and wellness, community development, amplifying their impact through micro-grants and community support. Strengthened career and employment support skills through workshops, mentorship, and networking opportunities, enhancing participants' prospects for personal and professional development. Improved mental health and well-being through wellness sessions and individualized support, promoting holistic growth and resilience among participants. Overall, the Resilient Youth for Change project was successful in achieving its objectives of empowering youth, fostering community engagement, and driving positive change in East Toronto through innovative projects and initiatives.

Conclusion: the evaluation of the Resilient Youth for Change project underscores its notable successes in empowering racialized youth within Toronto East, while also recognizing areas for improvement. Through effective outreach initiatives and skill-building workshops, the project exceeded its initial goal by supporting 60 youths and facilitating the implementation of numerous youth-led projects aimed at addressing pressing social issues. Participants experienced significant personal and professional growth, contributing to enhanced community engagement and fostering a sense of empowerment among marginalized communities.

Dr. Mahbub Hasan, MD, Professor, Centennial College, Contract Faculty, TMU, Program Advisor, Bangladeshi Canadian Community Services (BCS)

Urbi Khan, Journalist and Community Worker, Program Coordinator, BCS

Anuva Hasan, Social Work Student at York University, Youth Leader, BCS

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Karen Lobo, MD, MPH, Student, University of Toronto School of Continuing Studies

Presentation 2: Diversity - Discrimination and Deprivation

Presented by: AKM Alamgir

Conference proceedings: Shruthi Anna Thomas

Diversity influences discrimination causing deprivation.

Diversity is the proud reality of the Canadian multicultural society. To capitalize on diversity, we have to have an equity vision - intentional inclusion of diverse people. The outcome of a sense of belonging for all in society needs to be supported by healthy public policy. This will help in attaining the goal of improved quality of life.

The essence of diversity lies in acknowledging, respecting, and valuing the differences in characteristics, qualities, or elements within a group, community, or society. Embracing diversity involves recognizing that each individual brings a unique set of experiences and perspectives, which can contribute to a broader understanding of the world.

Our ability to adapt and thrive in this ever-changing world depends on our willingness to recognize and harness the power of diversity. Diversity encompasses differences in ethnicity, gender, age, background, and thought. Embracing such diversity enriches our collective intelligence and fosters creativity. When people from various walks of life come together, they bring unique problem-solving abilities that lead to innovative solutions. The slogan has to be ‘diversity for development.’

Embracing diversity is also about recognizing resilience. Resilience is the capacity of an individual, system, or organization to adapt, recover, or bounce back from challenges, setbacks, adversity, or stressors. It involves the ability to maintain a sense of equilibrium and functionality in the face of difficulties, uncertainties, and disruptions. Resilience encompasses emotional, psychological, and physical aspects, and it often involves developing coping mechanisms, problem-solving skills, and a flexible mindset. Resilient individuals or entities are better equipped to navigate through difficult circumstances, learn from experiences, and emerge stronger and more prepared for future challenges.

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The Canadian Human Rights Commission defines discrimination as: "Discrimination is an action or a decision that treats a person or a group badly for reasons such as their race, age or disability. These reasons, also called grounds, are protected under the Canadian Human Rights". Many scientific manuscripts from different regions of Canada have reported both everyday discrimination and discrimination when interacting with the healthcare system. To name a few, there is racial/ethnic and class discrimination, professional misconduct, dehumanizing the patient, religious discrimination, discrimination based on sexual orientation, and unequal access to health and health services.

Scales like the 'Everyday Discrimination Scale' by David R Williams, Harvard T.H. Chan School of Public Health, and the 'Microaggressions Distress Scale' by Monnica T. Williams are useful to measure the extent of such issues in a community. Different indicators can be used for prioritizing communities that are facing a high prevalence of discrimination like the census-based socio-demographic/ social equity indicators, education-system-based indicators, violence and crime indicators, discrimination indicators, power/social capital/service indicators, youth health indicators, and citizenship/immigration.

Supporting those being discriminated against is not sustainable as compared to promoting self-reliance and self-dependence. If barriers are removed while ensuring that legal boundaries are not being overstepped, then sustainability is ensured. We have to remove systemic barriers and revamp colonial policies.

The colonial system is a social structure that creates and perpetuates inequality through mechanisms such as racism, ableism, and sexism. It divides people into groups based on privilege or deprivation, resulting in unearned advantages or disadvantages determined by their identity rather than their actions or merits.

There is a need to shift the conversation from equality to equity and take it a step further to equity with the empowerment of those facing discrimination. The Theory of Change to move toward health equity for all in Canada is:

At the Champion level - Build organizational level knowledge, commitment, and capacity to routinely use a health equity framework, and evidence geared at overcoming systemic inequities in healthcare access, healthcare quality, and health outcomes.

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And looking beyond - Drive system-level leadership in equity-focused planning and evaluation practices at the micro, meso, and macro levels. Mobilize a community of practice within the CHC sector and across sectors (e.g. settlement) to inspire shared visions and actions for advancing health equity.

Dr. AKM Alamgir, PhD, MPhil, MBBS, Academic Editor, PLOS ONE Editorial Board, Adjunct Professor, School of Social Work, Faculty of Liberal Arts and Professional Studies, York University, Director, Organization Knowledge & Learning, Access Alliance Multicultural Health and Community Services

Presentation 3: Understanding the Roots of Racism and Discrimination

Presented by: Rabeeya Tasnim (she/her) and Hossain Tahseen Anayet (he/him)

Conference Proceedings: Helin Isik

Rabeeya Tasnim, a third-year undergraduate student majoring in Population Health at the University of Toronto Scarborough, and Hossain Tahseen Anayet, a Juris Doctor candidate at the Lincoln Alexander School of Law, Toronto Metropolitan University, presented a comprehensive session on the fundamental causes of racism and discrimination. The primary objective of the session was to educate attendees on the origins and impacts of these oppressive forces to foster a more inclusive and self-assured society. Racism was defined as a set of cognitive, affective, and behavioral processes involving negative attitudes, emotions, and actions towards individuals based on their race or ethnicity, making it more psychological. Discrimination was defined as the differential and unjust treatment of individuals based on their membership in a particular group, driven by discriminatory attitudes and stereotypes, making it more behavior-based.

The session's main goal was to deepen the understanding of the roots of racism and prejudice, enabling participants to recognize and challenge these issues confidently. The effects of colonization were discussed, highlighting the subordination of South Asians due to British colonial practices, leading to economic dependence and cultural inferiority. Examples included low wages for workers in countries like Bangladesh, as seen in brands like Shein and H&M. Traditional South Asian medical practices and cultural contributions are

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often disregarded or exploited, contributing to the ongoing invisibilization of these communities. Additionally, Islamophobia further persecutes South Asian Muslims, branding them as dangerous and at odds with national ideals.

Psychological factors were also examined, including implicit prejudice, which involves unconscious and automatic negative attitudes or stereotypes that are deeply integrated into daily life and can be very dangerous as they often go unrecognized. An example discussed was resume discrimination based on ethnic names, where individuals with "white" sounding names received more interview calls than those with ethnic names. Ingroup vs. outgroup dynamics involves categorizing individuals as either part of one's own group (ingroup) or a different group (outgroup), leading to cognitive biases and wrongful assumptions about outgroup members. Research indicates that people empathize more with ingroup members than outgroup members. The anticipation of interacting with members of an ethnic outgroup can cause anxiety, leading to either changing one's beliefs or clinging to preconceived notions.

The session discussed how media portrayal of different ethnic groups reinforces stereotypes, including African Americans often depicted as criminals or suspects, Latin Americans frequently shown as illegal immigrants or involved in gangs and poverty, Middle Eastern or Muslims portrayed as terrorists and white people typically depicted as law enforcement officers, heroes, or victims. Examples from popular media included "The Wire" (TV Series), criticized for focusing on African American characters involved in crime and drug dealing; "On My Block" (TV Show), portraying Latin American characters in gangs and poverty; and "Love & Hip Hop" (Reality TV), depicting Black women in ways that emphasize conflict, aggression, and sexual behavior, perpetuating harmful stereotypes.

Support and toolkits were provided, including the Canadian Human Rights Commission (CHRC), which allows individuals to file complaints under the Canadian Human Rights Act and the Accessible Canada Act, investigating complaints of discrimination and offering training programs, policy development, and support services. The Anti-Racism & Cultural Diversity Office (ARCDO) at the University of Toronto supports

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concerns or complaints related to harassment and discrimination based on race, ancestry, ethnic origin, citizenship, and religion, providing policy development, research, advocacy, and support services.

The session concluded with a call to understand the fundamental causes of racism and prejudice to address and combat these oppressive forces effectively. By educating ourselves and others, we can become more self-assured in recognizing and challenging racism and prejudice. For further information, the session included references to research articles and resources from the CHRC and ARCDO.

Hossain Tahseen Anayet, Honours Bachelor of Science, University of Toronto

Rabeeya Tasnim, Bachelor of Arts, International Development Studies, University of Toronto

Presentation 4: Exploring Anti- discrimination and Anti- racism Awareness among South Asian Immigrants in Canada.

Presented by: Afiah Islam

Conference proceedings: Karen Lobo

Background: The 'Education and Allyship Program' of Bangladeshi-Canadian Community Services (BCS), funded by the Government of Canada, aims to raise awareness about racism and discrimination, especially among Bangladeshi immigrants in the Canadian community. It explores the attitudes and awareness of South Asians, primarily Bangladeshi immigrants, towards these issues and how these findings enhance education and allyship.

Methodology: The survey was quantitative and gathered information from 105 respondents. Convenient sampling was used to collect data from respondents in various community gatherings. Data collection is still ongoing, though the information presented at the conference was collected as of January 2024. A self-administered quantitative survey was given to respondents which contained questionnaires developed by BCS based on their previous Peacemaker Initiative project from 2019. Analysis was conducted using SPSS version 26.

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Results: Out of the total participants, 63% were women and 37% were men. The age categories were split almost evenly, with 38% youth between the ages of 15 to 29, 34% middle-aged between the ages of 30 to 64, and 28% seniors who were 65 years or older. Around 69% were Canadian citizens, and 92% were South Asian Bangladeshi, while 8% were from other South Asian backgrounds. Through the questionnaire the respondents were given 10 examples of racism, discrimination, hate and Islamophobia. Examples like: Discriminatory attitude, such as people not liking respondents or assuming they can't speak English due to their identity, Negative treatment such as being treated rudely by strangers, Discriminatory practices, such as not being called back for a job interview or being paid less for being an immigrant, and Alienating practices or experiences, such as people not wanting to sit next to the respondents due to their identity. To calculate the scores respondents were assigned 1 to each statement they agreed with 0 for each statement they disagreed with. So, if the respondents scored 1 or lower, they had poor awareness of racism and discrimination and if they scored 2 or higher they had good awareness. A significant proportion of the participants (56.1%) had poor awareness about racism and discrimination (with a median score of 1 or 0). Only 46% demonstrated good awareness (with a median score of 2 or more). Men had a better awareness level (47%) compared to women (42%). Moreover, good awareness was observed among youth and individuals who had lived in Canada for more than ten years. Additionally, many respondents were not aware of the national racism strategy/policy. Only 43% would attempt to handle racism and discrimination calmly, while others would not take any initiative. Overall, the respondents exhibited relatively poor awareness about racism. There was a roughly even split between men and women, however, men had a slightly higher percentage. There was quite a difference in the level of awareness exhibited among the age groups, while most youth had good awareness, the older age group with senior respondents made up the lowest of those with good awareness. There may be a number of reasons for this, such as social media and information access, young people have grown up with the internet which may have exposed them to a wide range of perspectives and real-time discussions around topics related to racism and discrimination. Schools and universities are incorporating conversations around racism and diversity so the younger generations are more likely to receive formal education on these topics, increasing their awareness. Older adult

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immigrants may focus more on immediate survival and adaptation challenges, potentially prioritizing economic stability and integration over social issues. They might also come from societies where open discussion about racism and discrimination were less common or differently framed. Aside from the differences between age groups, respondents who lived in Canada for more than 10 years had better awareness than those who lived less than 10 years. The immigrants who have lived in Canada longer have greater acculturation. Over time they have adapted to the cultural norms and societal issues prevalent in Canadian society. This includes becoming more attuned to the conversations and sensitivities around racism and discrimination. They have also established social networks that often include a mix of other immigrants and native Canadians, providing diverse perspectives and experiences related to racism. Most respondents noted that they got information about racism and discrimination from other people, while many others noted electronic media, workshops and their own personal experiences as important sources. Awareness of the national anti-racism strategy and policies was low. A lot of people didn't know about what policies were in place to combat racism. Many respondents also reported being victims of hate, racism, and discrimination. About 21% of the respondents did not react to racism because they considered it to be normal, 18% chose not to comment. 8% left the place quickly, 9% became angry and 43% tried to meditate calmly. Taking initiative in these kinds of situations, among those with good awareness about 34.5% took no initiative and among those with poor awareness 52% took no initiative. However, in this study younger people were more likely to take initiative than older adults. So even with relatively good awareness of racism and discrimination it didn't necessarily translate into taking initiative or standing up and speaking out in these situations.

Conclusion: The survey found that many respondents lack awareness of racism and discrimination. Additionally, a significant proportion of respondents would not take any initiative to combat them. Seniors, middle-aged respondents, women and people living in Canada for less than 10 years need more attention to improve awareness.

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Session 2: Good Governance

Keynote speech: Cultivating Resilience Across Borders - Community Driven Health Equity from the West Bank to Nunavut in the Face of Climate-Induced Crises

Keynote speaker: Shawna Novak

Conference proceedings: Karen Lobo

The convergence of global health leadership, effective governance, and climate change is essential for creating resilient and sustainable societies. This keynote presentation examined ways to develop robust health systems and climate-resilient communities in the face of increasing climate change impacts. The keynote speaker emphasized that "Global health is both global and local, as it should be accessible to everyone."

Drawing from CISEPO's "Cultivating Resilience Across Borders" initiative, which tackles significant healthcare accessibility gaps in climate-affected regions, the session showcased innovative strategies and collaborative efforts that address both environmental and health challenges. Initially tested in the West Bank, the initiative created a comprehensive training program that includes the Obstetric Volume Scanning Imaging Protocol (ObVSI) with point-of-care ultrasound (POCUS) and Teleguidance. This approach allows frontline responders to take on roles traditionally held by physicians. The curriculum equips community health workers (CHWs) and midwives with vital skills to provide advanced maternal healthcare in resource-limited and conflict-affected areas. The speaker also highlighted the concept of social accompaniment, suggesting it could be a novel intervention for managing non-communicable diseases, implementing trauma-informed mental healthcare, and addressing social and political health determinants. Combining social accompaniment with digital interoperability promises long-term results.

The success of this pilot has paved the way for expanding the project to Nunavut, where Indigenous communities face direct and widespread climate impacts, such as threats to traditional food sources, new pathogen exposures, and destabilized health determinants. This initiative exemplifies a transregional approach to knowledge exchange and capacity building by linking the experiences and resilience strategies of

communities in the West Bank and Nunavut. The emphasis on community-driven solutions and the integration of education and technology highlights the complex relationship between environmental factors and health outcomes. This two-way knowledge exchange enriches global health literature and provides a replicable model for improving health and gender equity in climate-induced crises.

The speaker used a health systems perspective to explore the governance frameworks and collaborative mechanisms that support the success of such initiatives, stressing the importance of inclusive and participatory approaches. International partnerships and policy advocacy play a crucial role in supporting sustainable health systems that are resilient to climate change, offering practical insights for practitioners.

The project received support from CISEPO, the Fund for Innovation and Transformation (FIT), Global Affairs Canada, the Harvard Medical School Department of Global Health and Social Medicine, and financial contributions from Harvard University and the Ronda Stryker and William Johnston MMSc Fellowship in Global Health Delivery.

Shawna Novak, MD, MA, MMSC-GHD, FRSPH, Executive Director, The Canada International Scientific Exchange Program.

Karen Lobo, MD, MPH, Student, University of Toronto School of Continuing Studies

Presentation 1: Quality of Governance and Environmental Quality in Canada - Insights from Cointegration and Counterfactual Analysis

Keynote speaker: Md. Idris Ali

Conference proceedings: Shruthi Anna Thomas

Introduction: Over the last 5 decades, the planet Earth has suffered the persistent and severe consequences of climate change, including economic losses and loss of life due to rising sea levels, storms, drought, heatwaves, warming oceans, and melting glaciers. (Kumar et al., 2021) Under the Climate Action Goal, the Sustainable Development Goals set ambitious targets to limit global warming by keeping the increasing global average temperature no more than 2 degrees Centigrade above pre-industrial levels. World leaders from developed and

developing nations collect annually, to determine action plans in various environmental summits, including the recent COP-28 summit in Dubai 2023. Despite numerous action plans adopted, only a few have improved our planet's environmental quality.

Developed countries, particularly the G7 bear significant responsibility for environmental degradation due to greenhouse gas emissions resulting from non-renewable energy consumption. Natural Resource of Canada reports that Canada as a developed nation, has witnessed a rise in greenhouse gas emissions from 595 megatonnes in 1990 to 738 megatonnes in 2019, positioning it among the top 10 global emitters in recent years. The global challenge of climate change requires a closer examination of factors that can effectively reduce carbon emissions and improve environmental quality. Canada having a diverse energy portfolio, and significant industrial activities - the role of governance is important.

Good governance is characterized by transparency in policy-making, rigorous regulatory enforcement, active public participation, and a robust accountability mechanism. This is essential for the successful implementation of environmental policies.

Canada's commitment to international frameworks such as the Paris Agreement 2015 and the UN's Sustainable Development Goals (SDGs) highlights the importance of integrating effective governance into environmental studies. Despite significant efforts, the success of carbon pricing and renewable energy incentives in Canada is heavily influenced by the quality of governance. Strong governance structures not only facilitate the adoption of these policies but also ensure their effective enforcement and continuous monitoring.

Therefore, this research aims to investigate the extent to which good governance can mitigate carbon emissions in Canada contributing to a broader understanding of how governance quality affects environmental quality.

Literature Review: The quality of governance is widely recognized as a crucial factor influencing environmental outcomes including carbon emissions. This plays a pivotal role in policy implementation and enforcement. Studies reveal that countries with higher governance standards tend to have lower levels of pollution and more robust environmental protections. (Mahalik, 2024).

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The relationship between economic growth and carbon emissions is complex and often described by the Environmental Kuznets Curve (EKC). EKC suggests that as the economy grows, environmental degradation initially increases, but eventually decreases after reaching a certain level of economic development, when it reaches the peak. Some studies have provided empirical support for this hypothesis showing that higher income levels can lead to greater environmental awareness and the adoption of cleaner fuels. Other research indicates that without effective environmental policies, economic growth can lead to sustained increases in carbon emissions.

Energy consumption is one of the primary drivers of carbon emissions, particularly when it comes to fossil fuels. Numerous studies have highlighted the strong positive correlation between energy use and carbon emissions. Notable environmental degradations linked to non-renewable energy include acceleration of carbon emissions, expansion of ecological footprints, and the emission of methane and nitrous oxide (Khan et al., 2022a; Ahmed et al., 2023; Gyamfi et al., 2022). Policies promoting energy efficiency and transition to renewable energy are essential for mitigating the environmental impacts of energy consumption.

The impact of Foreign Direct Investment (FDI) on carbon emission is of note with both positive and negative effects documented in literature. On the one hand, FDI can lead to the transfer of clean technologies and environmentally friendly practices from developed to developing countries, potentially leading to reduced emissions. On the other hand, the pollution level hypothesis ascertains that FDI may increase emissions if funds are allocated to countries with lax environmental regulations. The effect of FDI on carbon emissions largely depends on the host country's regulatory framework and governance policy. There is a scarcity of studies that examine the critical role of governance quality, economic growth, energy consumption, and FDI on environmental quality.

The objective of this study is to empirically assess the effects of the quality of governance, economic growth, energy consumption, and FDI on environmental quality (carbon emissions) in the Canadian context. To address the objective, and based on available empirical literature the following research questions have been developed:

- How does the quality of governance affect carbon emissions?

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- How does economic growth affect carbon emissions?
- How does energy consumption affect carbon emissions?
- How does FDI affect carbon emissions?

Materials and Methods: For this research, Canadian annual time series data for the period 1990 – 2022 have been used. The dependent variable for this study is the carbon emissions (lnCO2) as a proxy of environmental quality.

The independent variables are the governance index (lnGOV), economic growth (lnGDP), total energy consumption(lnEC), and foreign direct investment (FDI)(lnFDI). The data has been collected from different sources including the World Bank, Statistics Canada, Canada Energy Regulator, and the US Energy Information Administration.

The baseline equation for the carbon emissions, i.e the quality of environment.

$$lnCO_2 = \alpha + \beta_1 lnGOV_t + \beta_2 lnGDP_t + \beta_3 lnEC_t + \beta_4 lnFDI_t + \varepsilon_t$$

Following the literature, a logarithmic transformation technique was applied to normalize the data (Niu et al., 2011; Ohlan, 2015; Andrée et al., 2019).

Different statistical methods were applied to analyze the data. First, we used descriptive statistics which showed the characteristics of the variables. Then we computed the order of integration using the Augmented-Dickey Fuller and Philip-Perron unit-root tests. After that, we implemented the bound testing approach to find the co-integrating relationships among the variables. The estimated statistics at the 5 % significance level is compared with the critical bounds value. Then we used the regulation method - Dynamic ARDL (DARDL) estimation.

Co-integrating relationships among the variables, as well as components simulation techniques for predicting the dependent variable. Then to check the robustness of the findings we employed Kernel-based ordinary least squares (KRLS) machine learning algorithm technique. And finally, we applied the model stability test by OLS Cumulative SUM (CUSUM) test.

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Results and Discussion: The descriptive statistics results show that all variables were mostly observed to be normally distributed with very low standard deviation. The ADF and PP unit-root tests were applied to discern the variables' stationarity status-whether they are integrated at the level [I(0)] or the 1st difference form [I(1)]. These two unit-root tests yield both the level [I(0)] and 1st difference [I(1)] order of integration. Therefore, we implemented the dynamic ARDL simulations technique. The ARDL cointegration test: The calculated F-statistic value for the model is larger than the upper bound critical value of Pesaran et al. (2001) at the 1% significance level.

The regression analysis results show that the quality of governance is linked to decreased carbon emissions in the Canadian context. While economic growth, energy consumption, and FDI are associated with increased emissions over the long term. But in the short term except for economic growth, all other factors contribute to carbon emissions in the short term.

KRLS estimation results confirm the robustness of the findings from DARDL. Also, the CUSUM test results show that the models are stable in the long run at the 95% confidence level.

The simulation technique we applied with DARDL, shows the quality of governance to carbon emissions within the counterfactual analysis. The plots derived from the dynamic DRDL solutions illustrate how the predicted variable responds to negative and positive shocks in a 30-year time value.

Increasing the governance quality contributes to decreasing carbon emissions. If the quality of governance increases then the emissions decrease and the opposite is true in the case of negative shocks. The opposite results hold true in shocks for the other variables; energy consumption, economic growth, and FDI.

Based on the findings, some policy suggestions -

(1) Encourage greater public participation in environmental decision-making processes. This can be achieved through public consultations, stakeholder engagement forums, and participatory governance mechanisms.

(2) Findings emphasize the urgency for policy interventions and the development of sustainable energy strategies to mitigate adverse environmental effects, promoting sustainable approaches across various

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sectors. The transportation sector, industrial sector, and different kinds of sectors where emissions are high need to be paid specific and individual attention by the government.

(3) The policymakers should focus on harnessing various forms of renewable energy, including hydro, solar, wind, and biogas.

(4) Offer incentives for foreign investments that bring in clean technologies and sustainable practices.

Md. Idris Ali, Ph.D. Candidate, Environmental Applied Science And Management, Toronto Metropolitan University

Presentation 2: Investment Tribunals and Environmental Protection- Friends or Foes?

Presented by: Hanie Fard

Conference Proceedings: Helin Isik

Hanie Fard is a PhD student at Osgoode Hall Law School, York University. She completed her B.S. degree in Law at the University of Tehran, Iran, and pursued her M.S. in Sustainability Management, focusing on climate change mitigation from legal and economic perspectives. Her PhD research interests center on climate change mitigation in the project-financing sector, from policy analysis to implementation. Hanie's work examines the challenges of implementing climate policies to enhance the outcomes of climate change mitigation in this critical area. In her presentation, Hanie Fard explores the relationship between investment tribunals and environmental protection, focusing on how foreign direct investment (FDI) can support the 2030 Agenda for Sustainable Development.

FDI is a key means of financing sustainable development goals, but its potential can only be fully realized through regulatory frameworks that prioritize FDI in sustainable development sectors. States use international investment agreements (IIAs) to attract FDI by offering specific standards of treatment and allowing foreign investors to seek recourse through investor-state dispute settlement (ISDS) tribunals.

IIAs impose obligations on host states to protect foreign investors, including non-discrimination, fair treatment, and lawful expropriation. However, not all FDI projects are environmentally friendly. When host states regulate to protect the environment, disputes often arise, leading ISDS tribunals to decide whether these regulations violate investment protection standards.

ISDS tribunals can create conflicts between protecting foreign investors and environmental safeguarding. Although they do not directly aim to hinder environmental regulations, their decisions in favor of investors can impede states' regulatory powers. Scholars argue that this issue stems from historical inequalities between developed and developing countries in international lawmaking, with wealthier states having more influence.

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The sole effect doctrine, commonly used in ISDS tribunals, prioritizes investors' economic interests over environmental concerns, often resulting in compensation for investors. The regulatory power doctrine offers a counterbalance by considering environmental regulations non-compensable, but it faces challenges in current jurisprudence. The investment reprisal approach, which partially compensates investors while considering environmental motivations, also encounters limitations.

Fard suggests incorporating transnational environmental obligations for foreign investors in ISDS tribunals. This would allow host states to highlight environmental non-compliance by investors and pursue counterclaims for damages from environmentally risky investments.

In conclusion, while ISDS tribunals can undermine environmental protections, involving transnational environmental norms could balance investor interests with sustainable development goals, leading to a more equitable approach.

Hanie Fard, Ph.D. Student, Osgoode Hall Law School, York University

The Trajectory of Sustainable development
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Day 2

Opening Remarks: Introduction of HSDNI

What/Who we are

Pioneered by Jannatul Islam, a sustainability initiative was taken in Memorial University Grenfell Campus by the Environmental Policy Institute's 2014 Master's students supported by the Grenfell Communities. HSDN International is a nonprofit organization that creates, coordinates, and disseminates research and sustainable activities with a slogan, "Live Simply, Live Lively". We are based in Canada but collaborate and work internationally, arranging conferences and seminars as well as publishing research in our peer reviewed journals collaborating for sustainable development. The HSDN is defined by the motto 'Live simply, live lively' and a vision "To attain sustainable development goals through collaborative movement". B It is a growing organization and truly an international undertaking with executive members from Canada,USA, Bangladesh, United Kingdom, and Nigeria.

Mission: Our mission is to promote socio-cultural, economic and environmental well-being for all through knowledge mobilization, collaboration, network building, and facilitation amongst like-minded organizations and individuals; from the grassroots to global level.

Strategy: Collaboration and cooperation for sustainable development

Why: We are aiming to attain sustainable development goals through collaborative movement. We believe, "getting people to really see where holistic sustainable development can fit into their lives or policies is the first step to achieving a more sustainable world".

By Whom: We are striving to reconcile economic growth with environmental interests and the protection of unique societal practices, cultures, and traditions. We invite you to join us as a participant, a teacher, a student, and a voice in this movement toward holistic sustainable development. Are you up to the challenge?

Our Uniqueness

We are not striving for saleable sustainable development rather holistic sustainable development based on cumulative environmental effects Assessment concerning human and nonhuman (environmental) facts.

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Also, Collaboration is our strategy and simply live is our moto. We believe everyone has a share to societal impacts. Let's see some changes to the better together.

Methods/Activities: To attain our main goal, our activities include but not limited to publishing a peer reviewed journal to build academic capability on sustainability; organizing and collaborating conferences, seminars and workshops to promote awareness and disseminate academic knowledge on sustainability; running blog and magazine to engage likely minded people around the world and striving to extend sustainability activities through branching in different countries and collaborating with different organization. Besides, our field based projects being taken as thematic to create a model. Currently we are running a Bangla School and developing model society concepts to implement. Besides our collaborative project Community Sustainability Global has been creating some impacts in Nigeria and British Columbia.

For the HSDN, our name is our goal; to create a practical model for worldwide holistic sustainable development. In doing so, we are striving to reconcile economic growth with environmental interests and the protection of unique societal practices, cultures, and traditions. We invite you to join us as a participant, a teacher, a student, and a voice in this movement toward holistic sustainable development. Are you up to the challenge?

Ayoola Odeyemi, Founding Member, HSDNI and Barrister And Solicitor of The Supreme Court of Nigeria and The Ontario Bar.

The Trajectory of Sustainable development
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Session 3: Public health

Keynote speech: Think Global Act Local

Presented by: Axelle Janczur
Conference Proceedings: Shruthi Anna Thomas

'Think globally, act locally' urges people to consider the health of the entire planet and to take action in their own communities and cities. Within the context of an increasingly globalised world and a very diverse population base, it is important for people to step back and see the connecting points to the bigger picture. This is a thinking framework that can help senior leaders in community-based health organizations to curate and organize globally workable frameworks.

A Billion People on the Move

Today there are some one billion migrants or forcibly displaced persons globally, about one in eight people. The experience of migration is a key determinant of health and well-being, and refugees and migrants remain among the most vulnerable and neglected members of many societies.

Canada has resettled more refugees than any other country in recent years, more specifically government-assisted refugees for the most part. The differential impact of COVID-19 on disadvantaged communities has been well-documented – 70% of people in Toronto who tested positive were Middle Eastern, Black, Latin American, and South Asian; and they comprise only 35% of the population of Toronto. This is an overlay of the reality of immigrants with an increasing health gap.

What is the Health Gap?

A health gap is when people face barriers to achieving the determinants of health due to factors relating to access to education, access to employment, access to good housing, immigration status, gender, and sexual orientation. In general, people facing barriers to the determinants of health have poorer health: lower life expectancy, lower birth weight babies and higher rates of infant mortality, chronic disease, greater prevalence of mental health problems, and decline of Immigrant Health Advantage. This gap is present at every step of the socio-economic spectrum.

'Imagine Canada' a think tank, for the non-profit sector, issued a report almost 10 years ago that Canada is in a social deficit. This means that we are living with intensifying prices and demand outpacing the supply of essential services the non-profit sector provides. Canada needs to fight this social deficit by promoting inclusive income growth benefitting more people, economic policy made with a social lens, reforming regulations governing charities, modernizing service delivery relationship between government and charities, and supporting more innovation and social enterprise.

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Poverty is racialized in Canada, with immigrants and refugees over-represented in precarious employment. The barriers to achieving the determinants of health contribute to inequities in health access, quality of care, and health outcomes. These are preventable and organizations like Access Alliance are focused on reducing these preventable health disparities.

Policy Challenges in addressing SDOH

The goals of the organization and as a sector, together need to be addressing policy issues and focused on systemic change. There are several policy challenges associated with readdressing Social Determinants of Health (SDOH) in Ontario.

- Health funders are focused on very clinical metrics – how do you measure "sense of belonging" which is an SDOH through cancer screening, panel size, FOBT, and flu shots.
- Non-health funders don't want to fund health as 'health' is perceived as a settlement issue.
- Smaller organizations, often those with the greatest proximity to vulnerable communities, have less ability to: Sit at multi-sectoral tables, Drive issues or Manage projects.
- Integration is imperative but the barriers to access remain significant – some communities have such terrible experiences that they delay or avoid accessing care/support.

What needs to change is how health is funded – piecemeal counting will always reduce the capacity to have holistic, integrated approaches. Health cannot be funded as silos – e.g. clinical services, SDOH focussed programming, etc. 'Access' strategies have to be understood and resourced appropriately with linkages to SDOH. On-the-ground expertise has to be amplified – hospital-driven networks have to make room for community-driven solutions. In the context of metrics for policy work or advocacy work with the government, we need sociodemographic data to be collected. Amidst the many challenges, there are unique opportunities that can be leveraged in this time and age. We have a more educated public with attitudinal and behavioral changes. There is a long-term shift in values orientation from "materialistic" to "post-materialistic". There is a diffusion of computer-mediated communications technology giving rise to participative forums and practices.

Universal and Targeted approaches to Health equity

Canada's universal health care system has a goal of reaching all Canadians, regardless of age, income, or employment status, and providing access to the basic level of health care for all. Universal in principle may not be universal in practice – this may advantage people who are already in favorable positions or fail to proportionately improve the outcomes of those in less favorable circumstances – thus widening the health gap. Targeted approaches applied to a priority sub-group within the broader, defined population are based on a belief that social constructs (e.g. racism, classism, sexism, ableism, and colonization) are barriers to equitable access to the determinants of health – and that interventions directed to disadvantaged members of society are needed

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to close the health gap. Targeted approaches may address the consequences of inequities rather than their causes – so may still not be enough.

Targeted universalism is a blended approach that recognizes that universalism can still result in an unacceptable health gap. It defines goals for all, identifies obstacles faced by specific groups, and tailors strategies to address the barriers in those situations. It includes consideration of systems change and works to address these issues like – over-representation of racialized women in precarious employment; fighting to increase bike lanes; developing best practice approaches; advocating to reduce police budget and developing alternative responses.

Building Organizational capacity

Concrete steps have to be taken to operationalize a Health Equity approach at the organizational level.

- Make health equity a strategic priority. E.g. Have an organizational position statement on equity (including a definition, expressed commitment, or pledge), embed it into the vision/mission/values, and make health equity an explicit strategic priority.
- Develop structures and practices to support health equity work. E.g. Formal and informal mechanisms to involve clients and community members in the planning and established Health Equity Committee to oversee and manage equity work across the organization.
- Take specific actions to address multiple determinants of health on which the organization can have a direct impact. E.g. Ensure routine collection and use of health equity data to inform strategies to improve health outcomes, and tailor quality improvement efforts to meet the needs of marginalized populations.
- Decrease all forms of discrimination and oppression within your organization. E.g. Policies, structures, norms that reduce implicit bias around race, employee equity surveys, ongoing training for Board and All staff, and complaints processes.
- Develop partnerships with others to improve health and equity at the societal/population level. E.g. Community partnerships/collaborations, Regional or cross-sectoral mechanisms, models, or networks for planning and implementing cross-sectoral action for equity.

Community-based health organizations have to commit to being evidence-informed, to go where the data leads. It is not just about patient-centered care, it is about community-centered planning through departments like community-based participatory research department. There is a need for multiple approaches to building individual capacity and social capital while focusing on knowledge mobilization, systems change, and advocacy. At its core should be the willingness to keep learning and develop tailored services - Roma, Syrian, Afghan refugee surges, African asylum seekers, LGBTQ-focused programming, food security, precarious stats advocacy, etc.

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The hallmarks of a learning organization are that the world is seen in "wholes" rather than parts; Process and content are inseparable; Cooperation rather than competition becomes the norm inside the organization and outside the organization, and community is a guiding principle. Collective leadership replaces hierarchical leadership which presupposes the leaders are in control and those below are not. A critical issue for the health and human services sector is the mass movement of people in the world, and this impacts us locally. We must leverage opportunities to build organizational capacity and responsiveness through bold leadership with the understanding that small changes lead to big changes.

Axelle Janczur (She, Her), Executive Director, Access Alliance Multicultural Health & Community Services

Presentation 1: Practice-based Model for Conducting Community Health Needs Assessment

Presenter by: Courtney Kupka

Conference proceedings: Karen Lobo

Access Alliance is an organization that serves immigrants and newcomers in Canada. In practice since 1989, the founding communities were Vietnamese, Portuguese, Spanish and Korean. Through the course of their history, they have shifted towards focusing on disadvantaged newcomer communities, health access and health equity. The organization provides primary care, illness prevention, health promotion, community capacity building and service integration. The mission of the organization is to provide services and advocate to improve health outcomes for immigrants, refugees and their communities which have been made vulnerable by systemic barriers and poverty.

The learning objectives of the presentation were:

- How to conduct a Community Health Needs Assessment (CHNA) and what are the challenges.
- Understanding of the Access Alliance model of conducting Community Health Needs Assessments to generate evidence on the needs, assets, and concerns of the community.
- The best practices for engaging diverse communities, including newcomers and immigrants, in the spirit of community development.

Community health need assessment is defined as a process that identifies and describes
the needs and assets of the community to identify priorities which facilitate evidence-informed decisions for programs, services or advocacy efforts aimed at improving factors that contribute to the health and wellness of individuals and the community as a whole. (1) There are some key components to this definition, that knowledge is not imposed on the community, but rather the communities' experiences, information and needs are gathered so that it is truly community based. Traditionally in a community health needs assessment the asset part is always left out and only focused on the disparities. What are the negative aspects, what are people in need of, in addition to that the community has such great assets. And both needs and assets are important to

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create evidence-informed decisions for the programs, services and advocacy efforts, focusing on holistic components of health and wellness and evidence-informed, not imposed knowledge.

Phases of community health need assessment:

Phase 1: Ideation phase

This phase is where ideas are created for what the community health needs and assets assessment will be. Aspects such as social determinants of health, budgets and resource identification and allocation need to be kept in mind in order to conduct the project. Another important aspect of this phase is scope identification and making sure that the resources are appropriately matching the scope.

Designing the project: It is done by gathering information about the demographic profile of the neighborhood, this information is available form StatsCan or local public health units. Information such as what could be the sample size, how is the community representative of different populations and different characteristics based on country of origin, racial, ethnic group, gender, age. Designing a project focuses on factors such as usability, appropriateness, feasibility, fitness, preparedness and outreach strategy.

Methodology of the project: This will include the tools, the tools must be sensitive, specific, valid, accurate, scalable, auditable, appropriate, and comparable. The tools can change based on what the scope and topic or objective of the community health needs assessment is. The timeline of this phase would take about three to five months.

Phase 2: Implementation phase

This phase involves training the team, engaging other partners and the advisory committee. In this phase surveys are conducted, keeping in mind the demographic profile of the neighborhood, having a target number of surveys, ensuring that the responses and data collected were representative of the individuals in the community. The collected data is then analyzed to identify the preliminary findings. A focus group discussion is created based on the findings and to identify other areas that were missed during the survey. The focus groups are stratified based on age, and various racial ethnic groups. An in-depth interview of the service providers is conducted. These service providers engage with the individuals of the community on a daily basis. The interviews and focus group discussion are transcribed and qualitative data analysis is conducted on the gathered information. The data from the surveys and qualitative data are brought together for data triangulation. The finding must be accessible and easy to understand, using graphics, or infographics. The expected timeline is from three to six months, depending on what the scope of the community health needs assessment will be.

Phase 3: Utilization phase

In this phase the findings and results are reported back to the community and to the advisory committee. This is done not only to share the information and knowledge but also to validate the findings. The information is finalized and publicized and is shared amongst the community. The key components of utilization are evidence-informed program planning, partnership/resource allocation, collaborative funding proposals, monitoring of inequities, policy advocacy/ratification. Ensure that the project takeaway is long term and actionable. The expected timeline is from one to two months. Some of the best practices to engage diverse communities are, assess and understand your position in the community, understand the demographic profile of the community, Engage and train diverse team members such as Community Health Ambassadors and Peer

The Trajectory of Sustainable development
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workers, outline your scope and intentions, Get familiarized with the community (e.g. residents, schools and organizations/ businesses), Engage trusted and connected individuals or organizations in the community and finally meet individuals where they are – geographically, socially, skills/accessibility (e.g. language, digital) and preferences.

Reference:

1. Adapted from Ravaghi et al., 2023 https://doi.org/10.1186/s12913-022-08983-3

Courtney Kupka, MHE, Research and Evaluation Coordinator

Karen Lobo, MD, MPH, Student, University of Toronto School of Continuing Studies

Presentation 2: Food safety training in Bangladesh: A policy Study for a Safe Food System

Presented by: Jannatul Islam

The World Health Organization (WHO) (2022) found that unsafe food has a considerable disease burden globally with 600 million people suffering from foodborne illnesses annually. In 2010 alone, 420,000 people died worldwide, and it costs 110 billion US dollars every year for Medicare (WHO, 2022). The impacts of unsafe foods differ depending on the country, due to differences in food safety regulations, socio-economic, and environmental situations. The Global Food Security Index (GFSI), which indexes public health status worldwide, illustrates how developed countries are less affected by the unsafe foods, while less developed countries are impacted worse. One research study found that about 57% of the people globally consume adulterated food (Pal &Mahinder, 2020). Almost 150 million people suffer from food adulterate-related diseases, while Bangladesh is at the top of the list.

Bangladesh is a country of about 170 million people, which is a high density of 1265 people per km^2. This is the eighthmost populated country in the world, with a median age of only 27.6 years, with 39.4% of people living in urban areas. Due to the high rates of rural-urban migration to cities such as Dhaka, where there is a lack of affordable housing, eight million people consume food from street vendors (Khairuzzaman et al.,

2014), and many more in restaurants. This is because people largely do not have access to their own cooking facilities.

Bangladesh is inherently and critically facing the food safety and security issues due to the lack of policy framework in educating and controlling food safety issues. Uncertainty, complexity, and socio-political ambiguity are associated with class based society like Bangladesh. Finding better ways for meeting the needs of communities and developing a practical model to address those issues are very crucial. There is evidence that the food safety issue is becoming alarming which needs urgent attention of researcher and policy makers while to create a social movement towards good health and well-being which is the 3rd goal of SDGs.

The research will attempt to investigate current scenario, assess perspectives of food handlers towards food safety stewardship and create a policy framework to address the food safety issues in Bangladesh which can replicable to similar socio-economic status countries in the world.

Jannatul Islam, Ph.D. Candidate, EnSciMan, Toronto Metropolitan University

The Trajectory of Sustainable development
Volume 8, Issue 1 (Special Issue), September 2024 (*ISSN 2818-0178)*
Formerly: Journal for Worldwide Holistic Sustainable Development (JWHSD), ISSN2409-9384 (online version) & ISSN 2414-3286 (print version)

Panel discussant: Public Health Ecosystem as a Determinant for Sustainable Living and Development

Panel discussion by: Akm Alamgir and Rosanra Yoon

Conference proceedings: Karen Lobo

Public health can be defined as an inclusive and democratic model of Healthcare Systems and Services, where the healthy behaviors of the people are ensured by the participation of trained and empowered peoples for the improvement of population health through healthy public policies. (1)

Sustainability can be defined as a composite multidimensional construct that refers to the social, economic, and environmental development of the ecosystem in which the needs of the present are met "without compromising the ability of future generations to meet their own needs". (2)

Both public health and sustainability are inter connected and can be used collaboratively.

A great example of it being used collaboratively is vaccination. Vaccination is a public health intervention that plays a central role in reaching the sustainable development goals (SDGs). Immunization directly impacts health (SDG3) and contributes to 14 out of the 17 Sustainable Development Goals (SDGs), such as ending poverty, reducing hunger, and reducing inequalities. However there are a few Challenges in achieving these goals mainly availability of effective and safe vaccines, accessibility, affordability, local/ regional vaccine production, public- private partnerships and immunization capacity/ capability building.

The main theoretical directions for social determinants of health in context to sustainability are political economy of health, social ecology of disease, social epidemiology and neurobiological approaches. There is a perspective of how social determinants affect public health that is mainly through social selection, mobility and causation. Structural determinants such as socioeconomic structure, public policies, governance, social class, education, gender and income can impact on equality of health and wellbeing of the community. Food security and food justice is another public health and sustainability concern. Factors such as war, drought, food politics, and agriculture health and trade policy are directly correlated to food security. Food is one of the basic needs for survival and it should be accessible, affordable and available for all. Social equity and social justice both work

hand in hand and should be incorporated in the development of good health policies.

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Session 4: Food Insecurity

Keynote speech: Food Insecurity, Armed Conflict and Refugees

Presented by: Mustafa Koc

Conference proceedings: Shruthi Anna Thomas

At the World Food Food Summit of 1996, food security emerged as a global priority. Food security refers to a condition where "all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO, 1996).

At the Centre for Studies of Food Security, five markers of food security has been identified. A food secure experience is when all 5 of the conditions are met:

- Availability - sufficient supply, food is available when we need it
- Accessibility - effective distribution, we have economic and physical access to food
- Adequacy - healthy and safe foods and a sustainable food system, our food is adequate for our needs
- Acceptability: food that is culturally acceptable, our food is acceptable for our traditions and in line with our values
- Agency: institutions and structures enable access to food, we have agency within our food system

A person is food insecure when they lack regular access to enough safe and nutritious food for normal growth and development and an active and healthy life. (FAO, 2022) Currently, the world is facing a crisis in food security in many countries. Food crises are the result of multiple drivers. The primary drivers of acute food insecurity in countries with food crises are conflict/war-related insecurity, weather extremes and economic shocks.

In 1996, WFS estimated that about 824 million people were without enough food and world leaders made a commitment to reduce hunger by half to 412 million by 2015. In 2002, the FAO revised this projection to 610 million people will be undernourished by 2015 and 440 million by 2030. The situation worsened with the economic downturn between 2008 and 2011 and rising food prices.

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Despite some notable progress towards the targets of the Rome Declaration on food security in some countries worldwide, food insecurity rates have continued to rise among the most vulnerable groups in recent years. The State of Food Security and Nutrition in the World (FAO, 2023) estimates that "about 29.6 percent of the global population – 2.4 billion people – were moderately or severely food insecure in 2022, of which about 900 million (11.3 percent of people in the world) were severely food insecure".

It is often assumes that food insecurity is a concern only in developing countries. Even in advanced industrial countries, the number of people facing food insecurity has been rising in recent years. In Canada, for example, the percentage of households with inadequate or insecure access to food due to financial constraints rose to 17.8 percent in 2022 from 15.9 percent in 2021. Precarious work, the erosion of social support programs, a lack of affordable housing, and the rising cost of living are among the significant factors behind this trend. A report released in November 2023 indicated that the number of people who used Ontario food banks went up 38 percent last year - the largest single year increase recorded by the food banks.

Historically, Canada did not have a food bank till 1981. The first 'blue bag' opened in Edmonton during the economic downturn as a temporary measure. We now have a large number of people going to food banks every month to feed themselves and their families. Research indicates that only about 20% of people who are food insecure, consider going to a food bank, many feel uncomfortable or ashamed.

The world must achieve a "great balancing act" in order to sustainably feed 9.6 billion people by 2050. Three needs must be met at the same time:

- Closing the fod gap
- Supporting economic development
- Reducing environmental impact

Approximately 24% of all food produced (by caloric content) is lost or wasted from farm to fork during production (6%), Handling and storage (6%), Processing (1%), Distribution and market (3%), and Consumption (8%). For a sustainable food system, we have to find ways to eliminate waste.

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Food systems contribute 19-29% of total GHG emissions. Agriculture is the largest contributor of non-CO2 GHGs. The four largest multinational meatpackers control 54% of poultry processing, 67% of pork packing and 85% of beef packing in the USA. This extreme concentration gives these companies — such as Tyson Foods and foreign-owned JBS and Smithfield — immense power to privately govern the livestock industry and squeeze farmers and ranchers. Corporate consolidation is a reason that the farmer's share of every dollar we spend on food dropped from 50 cents in 1952 to 14 cents in 2021, the lowest on record. (Wertish, 2023)

Food insecurity is generally associated with chronic poverty. Disruptions such as financial crises, natural disasters, climatic change and wars can have a profound and enduring impact, triggering long-term poverty and food insecurity. These events destroy people's ability to produce their livelihoods, leaving them without the means to feed themselves and their families, and leading to a cycle of hunger and food insecurity that can persist for years.

While rising inflation, COVID-19, and the financial crisis are often blamed, armed conflict is one of the most significant contributors to food insecurity. Wars destroy lives, livelihoods, and the environment. Funds spent on armament also deter societies from investing in social welfare and development. In the first half of 2022, many countries that relied on imports from Russia and Ukraine for fuel, fertilizers, and essential food commodities like wheat, maize, and sunflower oil experienced shortages and had to pay higher prices. In Gaza due to recent events reports state "We have never seen a civilian population made to go hungry so quickly and completely compared to any other place in the world in modern history. Now, children are starting to die from malnutrition and dehydration which indicates that famine is already striking Gaza or famine is around the corner. We have never seen children pushed into malnutrition so quickly anywhere else in the world" (Michael Fakhri, UN Special Rapporteur on the Right to Food, March 6th 2024).

Failure to address key climatic, economic, political, and societal challenges at the national and international levels and lack of trust in key institutions of governance, media, and civil society creates an environment of hopelessness, distrust, and cynicism, leading to a global legitimacy crisis. The sustainability of our current food system is not entirely positive. It would be wise to remember the words of the historian Arnold Toynbee who

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during the Second World War was writing his book about how civilisations rule and disappear like the Roman Empire - “Civilizations die from suicide, not from murder.”

Dr. Mustafa Koc, Professor, Department Of Sociology And Director, Centre For Studies In Food Security, Toronto Metropolitan University

Presentation 1: Challenges in Food and Nutrition Among Recently Arrived 60 South Asian Bangladeshi Refugees in Toronto

Presented by: Qazi Shafayetul Islam

Introduction: In 2023 and the beginning of 2024, a significant number of refugees arrived in Canada from across the world. Usually refugees face various challenges, including access to food, housing, language barriers, and adapting to Canadian culture. The government and local organizations provide support to help address these barriers and ensure the refugees can live safely in Canada. In Toronto, the Bangladeshi-Canadian Community Services (BCCS) has been particularly focused on assisting South Asian Bangladeshi refugees with information, application assistance, language interpretation and classes, and limited food support. This study aims to identify the current food challenges faced by South Asian Bangladeshi refugees and develop a future food program tailored to their specific needs.

Methods: In a cross-sectional study, 60 South Asian refugee claimants in Toronto were interviewed to explore their social background, perceived food challenges at home, and their expectations from local organizations in addressing these challenges. BCS provided one-time food vouchers to these refugees, and two trained interviewers conducted face-to-face interviews using structured and semi-structured questionnaires. Additionally, a Focus Group Discussion (FGD) involving eight participants was held for further clarification and explanation. Frequency analysis was performed using SPSS version 26.

Results: The recipients of the food vouchers were South Asian Bangladeshi refugees. 70% of them arrived in Canada as individuals. Their mean age was 38.75 years, and they had been in Canada for an average of three months. Almost 92% of the food voucher recipients were men. Most of them learned about the BCS’s food vouchers through community members (50.0%) and neighbors (35.5%). They mostly used buses or trains to

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travel from distant locations to collect food vouchers. About 86.7% of recipients sometimes lacked sufficient food at home after coming to Canada. Almost 52% of recipients couldn't afford to eat meat/fish, vegetables, and fruits daily. Only 8% could afford to eat all. The main reason for this was the increase in prices, and they also reported cultural differences in food.Furthermore, 75% were unaware of the Canadian food guide.

To overcome their food shortages at home, 75% were registered with the food bank, and 66.7% went to the food bank regularly. However, most of them reported that the food they received from the food bank was insufficient to meet their needs. Some people thought that the rice they received from the food bank was of poor quality because when they cooked it traditionally, it turned out sticky and inedible.Some couldn't use canned food because they were not familiar with it. When they lacked food, 35% did not know how to improve the food shortage at homes and did nothing, and 55% sought help but did not know where to go. About 83% of the recipients (refugees) felt sad and depressed due to food shortages at home. Their average food expenditure was $225 monthly. As they lived in shared rooms or with family members, 60% would share food after buying it with the voucher because their roommates and family members also sometimes lacked food at home. The recipients shared food with average number of 2.8 persons. The recipients believed they could manage food with food vouchers for seven days on average. 62.7% of them felt that a one-time food voucher did not meet their current food challenges, and they expected ethnic organizations like BCS to arrange cultural food for at least 2/3 days (37.5%) and provide them with monthly food vouchers to overcome the current food and nutrition challenge among the refugees.

Conclusions: South Asian Bangladeshi refugees are in urgent need of support to overcome food and nutrition challenges. Immediate community initiatives are crucial to ensure that every refugee has access to an adequate food supply. The government provides funding to local organizations at different levels to address this pressing issue.

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Presentation 2: Legal and Ethical Aspects of Deploying Artificial Intelligence in Climate-smart Agriculture

Presented by: Mahatab Uddin

Conference proceedings: Karen Lobo

Three key topics related to food insecurity are climate change, artificial intelligence, and food security. According to the World bank, climate-smart agriculture refers to an integrated approach to managing landscapes—such as cropland, livestock, forests, and fisheries—that addresses the interconnected challenges of food security and accelerating climate change. The main components of climate-smart agriculture include increased productivity, enhanced resilience (adaptation), and reduced greenhouse gas emissions (mitigation). By integrating AI with climate-smart agriculture, AI-based technologies can be utilized for crop management, water management, soil management, monitoring peatlands and forests, disease detection, and recognizing crop quality and species.

To ensure the smooth operation and effective use of AI-based technologies in climate-smart agriculture, several ethical and legal concerns need to be addressed. These concerns include:

- **Data Inaccuracy and Wrong Recommendations**: AI algorithms may not always be accurate, leading to incorrect recommendations that could cause disputes between farmers and technology providers.
- **Data Ownership and Intellectual Property Issues**: Since AI relies on data and algorithms, questions arise about data ownership, the extent to which data can be shared, and who has the right to access it.
- **Digital Divide**: Technology is not universally available, especially in remote areas, leaving some farmers unable to access AI-based technologies. This creates an advantage for farmers who can access these technologies over those who cannot.
- **Privacy and Security Issues**: Ensuring the privacy and security of data used in AI applications is crucial.

These ethical concerns can be combated with Legal remedies.

Criminal Law: To address data inaccuracy and wrong recommendation issues in cases where damages are

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derived from any ubiquitous wrongdoing against society. A crime under criminal law requires two elements: actus reus (a voluntary criminal act or omission) and mens rea (a guilty mind or intent to commit a crime). If AI-run robots or other technologies used in climate-smart agriculture are considered to have "sufficient awareness" similar to humans, these technologies could be held liable as direct perpetrators of criminal offenses. If it becomes widely accepted that AI-based robots or technologies possess their own mind and free will like humans, significant amendments to the current legal system would be necessary (1).

One can consider applying following three scenarios of the given model into data inaccuracy based or any other technical error such as wrong recommendation or wrongful act of climate-smart agricultural AI:

- **The first scenario termed – 'perpetrator –via-another'** involves situations where an offense is committed by an entity lacking mental capacity or the ability for mens rea, such as a child or a mentally deficient person. These entities are considered innocent agents. However, if a competent person directs this innocent agent to commit a wrongful act, the director is held criminally responsible (1). Therefore, if AI-based climate-smart agricultural technologies are deemed innocent agents in any wrongful act, the AI technology developer or user would be considered the 'perpetrator-via-another'.
- **The second scenario, known as 'natural-probable-consequence,'** suggests that even if a conspiracy cannot be proven, an accomplice (someone who assists in committing a crime) can still be held legally responsible if the perpetrator's actions were a likely and natural outcome of a plan supported or aided by the accomplice. This situation could occur if an AI-based climate-smart agricultural technology, intended for beneficial purposes, commits a wrongful act due to misuse. For example, if a farmer uses crop-harvesting robots on their own farm, but the robots mistakenly harvest crops from neighboring farms, anyone who could reasonably foresee such an error (such as the farmer, the technology provider, or the program developer) might be held liable for the robots' actions.
- **The third scenario, termed direct liability, involves attributing both actus reus (the physical act) and mens rea (the mental intent) to an AI**. While attributing actus reus is straightforward, attributing mens rea is more complex. For example, if an AI-based climate-smart agricultural technology is

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infected by a virus, a defense similar to coercion or intoxication might be claimed. Similarly, in the case of a malfunctioning AI, a defense akin to insanity might be invoked (1).

Determining who to punish for data inaccuracies or technical errors, such as incorrect recommendations or wrongful acts by climate-smart agricultural AIs, is challenging. The term 'programmer' can include various stakeholders, such as the program designer, product expert, and their supervisors. The fault might also lie with a manager who hired insufficiently skilled programmers or AI developers (1).

According to the European Parliament Resolution (2017) on AI, legal responsibility for actions or inactions by AI technologies is assigned to human actors, including the owner, developer, manufacturer, or operator of the AI (1). In Europe, this means the owner of a self-driving car is responsible for any wrongful acts committed by the car (1). However, the issue becomes more complex with third-party involvement. The resolution states that under the current legal framework, robots cannot be held liable for acts or omissions that cause damage to third parties (2).

Tort Law: To address issues of data inaccuracy and incorrect recommendations that result in damages due to negligence, tort law is relevant. According to the legal dictionary Tort law deals with civil wrongs or wrongful acts, whether intentional or accidental, those cause injury to another. According to the Legal information institute the primary purposes of tort law include providing relief to injured parties, imposing liability on those responsible for the harm, and deterring others from committing harmful acts. The focus on tort law is expected to increase in the coming years due to the rise of self-driving cars. However, tort law is not limited to AI-based self-driving cars; it can also cover wrongful acts and injuries caused by other AI technologies, including climate-smart agricultural AI.

Comparing wrongful acts of climate-smart agricultural technology to accidents caused by self-driving cars, two areas of law become relevant: negligence and product liability (1) Currently, most accidents are due to driver error and are governed by the negligence doctrine, which holds people liable for acting unreasonably under the circumstances (1).

To prove a negligence claim, such as one against errors from AI-based climate-smart technologies like

automated tractors or disease detectors, plaintiffs must demonstrate that the defendant had a duty of care, breached that duty, caused harm through the breach, and that the plaintiff suffered damages as a result. These elements are also applicable to harm caused by a farmer's AI-run robots to neighboring farms. Under the product liability doctrine, if a self-driving car crashes due to a software error, the responsibility lies with the manufacturers, distributors, suppliers, retailers, and others involved in making the product available to the public. These parties are responsible for compensating the plaintiff (1).

Similarly, if climate-smart AI technology causes harm to third-party property due to data inaccuracy or technical errors, the technology developer, provider, or any entity involved in making the product available must compensate the affected party. According to the Merriam-Webster Law Dictionary, to implement the product liability doctrine, the case must pass the "risk-utility test," which determines if the product's design risks outweigh its benefits. This test often requires expert witnesses, making the process complex.

Therefore, under existing tort law, if a third party claims compensation for harm caused by faulty climate-smart agricultural AI (e.g., yield predictors or disease detectors), the plaintiff must navigate a complex legal process.

Data Protection and Privacy Law: To address data privacy and security issues. This is more likely to happen in low to middle-income developing countries, which lack appropriate data protection legislations.

Conclusion: Addressing climate change through AI-based technology must align with both global and local practices. This is a complex challenge because there is no universally binding definition or international regulation for climate-smart agricultural practices. While countries implement their own laws, regulations, or policies on agriculture at the national level, these vary significantly based on geographical, socio-economic, and political factors. Therefore, globally, countries need to agree on laws or policies for AI applications in climate-smart agriculture and collaborate on innovation and deployment. A globally agreed treaty should consider ethical issues such as data inaccuracies, technical errors, data ownership, intellectual property, economic disparities, and privacy and security concerns associated with AI in agriculture.

Locally, countries should adhere to international laws and policies and develop suitable national regulations to address ethical concerns in AI deployment for climate-smart agriculture. When creating these laws and

regulations, countries must consider the interests of all stakeholders, including small and large-scale farmers, technology providers, developers, and investors. Each party has different interests, making it crucial to understand the interfaces of these multi-stakeholder interests. By doing so, countries can adopt effective laws and policies for AI deployment in climate-smart agriculture.

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Conclusion

The 8th HSDNI's Sustainability Collaborative Conference on Racism and Discrimination, Good Governance, Public Health, and Food Insecurity brought together experts, policymakers, and community leaders to address some of the most pressing issues of our time. The discussions highlighted the interconnectedness of these topics and the need for comprehensive and inclusive approaches to create lasting change.

Key Takeaways:

1. **Racism and Discrimination:** The conference underscored the pervasive impact of racism and discrimination on various aspects of life, including access to healthcare, education, and economic opportunities. It was emphasized that systemic racism must be dismantled through policy reforms, education, and community engagement.
2. **Good Governance:** Effective governance was identified as crucial for ensuring equity and justice. Transparent, accountable, and inclusive governance structures are necessary to build trust and foster community resilience.
3. **Public Health:** The importance of addressing social determinants of health was a central theme. Public health strategies must prioritize marginalized communities and ensure equitable access to healthcare services.
4. **Food Insecurity:** The discussions revealed the deep-rooted causes of food insecurity, including economic disparities and discriminatory practices. Solutions must involve both immediate relief measures and long-term strategies to ensure food sovereignty and security for all.

Recommendations:

- **Policy Reforms:** Implement policies that address structural inequalities and promote social justice. This includes improving access to quality healthcare and education, and ensuring fair labor practices.
- **Community Engagement:** Foster strong community partnerships to empower local voices and ensure that solutions are culturally relevant and sustainable.
- **Education and Awareness:** Increase public awareness about the impacts of racism and discrimination and promote educational programs that foster inclusivity and respect for diversity.

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As we move forward, it is imperative to remain committed to the principles of equity, justice, and inclusivity. By working together across sectors and communities, we can create a society where everyone has the opportunity to thrive. Let us continue to challenge systemic barriers, advocate for those who are marginalized, and build a future that is fair and just for all.