

HLPF Side Event

Summary Report 2021



**HIGH-LEVEL POLITICAL FORUM
ON SUSTAINABLE DEVELOPMENT**

Side Event

HaritaDhara Research Development and Education Foundation

**Decade of Action, SDGs and Building Sustainability through
Educational Games, and Hands-on Activities**

**July 14, 2021
Virtual Side Event on Zoom**



HaritaDhara Research Development and Education Foundation

HIGH-LEVEL POLITICAL FORUM 2021 UNDER THE AUSPICES OF ECOSOC

The high-level political forum on sustainable development (HLPF) is the core United Nations platform for follow-up and review of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals. This year, the meeting of the HLPF in 2021 held **from Tuesday, 6 July, to Thursday, 15 July 2021**, under the auspices of the Economic and Social Council. This includes the three-day ministerial meeting of the forum **from Tuesday, 13 July, to Thursday, 15 July 2021**.

The HLPF will discuss ways to ensure a sustainable and resilient recovery from COVID-19 that puts us on track to realize the 2030 Agenda. The theme will be *"Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development: building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development"*.

The HLPF in 2021 will discuss Sustainable Development Goals 1 on no poverty, 2 on zero hunger, 3 on good health and well-being, 8 on decent work and economic growth, 10 on reduced inequalities, 12 on responsible consumption and production, 13 on climate action, 16 on peace, justice and strong institutions, and 17 on partnerships in depth. The Forum will also consider the integrated, indivisible and interlinked nature of the Sustainable Development Goals. Ministers and other participants will be able to explore various aspects of the response to the COVID-19 pandemic and its impacts. They will discuss the kind of policies and international cooperation that can control the pandemic and its impacts and put the world back on track to achieve the SDGs by 2030, within the decade of action and delivery for sustainable development. 44 countries will also carry out voluntary national reviews (VNRs) of their implementation of the 2030 Agenda. The United Nations High-level Political Forum on Sustainable Development is a subsidiary body of both the United Nations General Assembly and the United Nations Economic and Social Council responsible for the entire organization's policy on sustainable development.

SIDE EVENTS

Side Events are scheduled to be organized on the margins of the 2021 HLPF under the auspices of ECOSOC and sponsored by Member States, the UN system and other intergovernmental organizations and the Major Groups and other accredited Stakeholders. These Side events of the HLPF- held outside the official programme- provide great opportunities to discuss themes and SDGs under review at the HLPF, deepen the discussion on VNRs, identify new issues, listen to all voices, and help spread greater awareness of the 2030 Agenda and the SDGs in general at all levels. Proposed side events should be closely related to the work of the High-level Political Forum on Sustainable Development (HLPF).

Decade of Action, SDGs and Building Sustainability through Educational Games, and Hands-on Activities

UN HLPF 2021 Side Event

Building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development with SDGs 3, 8, 10, 12, 13

Join Us for HLPF Side-Event 2021

HaritaDhara Research Development and Education Foundation



HIGH-LEVEL POLITICAL FORUM
ON SUSTAINABLE DEVELOPMENT



Side Event

Decade of Action, SDGs and Building Sustainability through
Educational Games, and Hands-on Activities



WEDNESDAY, 14 JULY 2021



7:30 AM - 9:00 AM (New York
Time) 05:00 - 06:30 PM (New Delhi
Time)



Online Event

To Register your interest, please visit
<https://www.hrdef.org/event-registration>

For further queries email us
at info@hrdef.org



Let's Join

HLPF- Side Event 2021

How does research into games help us better to design games that helps everyone to change our self and things around us for better sustainable development? We know role of games in our life but not able to utilize the power of games for Sustainability, and SDGs. Thus, dialogue on educational games and hands-on activities for SDGs learning, and building sustainable living in the present pandemic time is very crucial for everyone.



Virtual Event

14th July, 2021,

07:30 - 09:00 AM (NY
Time)

05:00 - 06:30 PM (IST)

Join the Dialogue

Spread the Word

Register Here

<https://www.hrdef.org/event-registration>

FOLLOW US AT



www.hrdef.org



@HRDEFIndia

Decade of Action, SDGs and Building Sustainability through Educational Games, and Hands-on Activities

VIRTUAL SIDE EVENT Online: 14th July, 2021,
07:30 - 09:00 AM (New York Time)/ 05:00 - 06:30 PM (New Delhi Time)

HRDEF is working on educational Games for Learning Sustainability Concepts, Sustainable Development Goals (SDGs) by Youth and Community for couple of years and presented our work at the TECH 2017, 2018 UNESCO MGIEP Global conference, UNESCO ESD 2021. We designed, developed games, hands-on activities for understanding difficult concepts related to sustainable development in an interactive way. Games are unique with their rules, choices, consequences, constraints, good educational games force players to form theories and develop computational thinking. We discuss use of games in school, and after school program for students and youth in different settings as informal education for building sustainability concepts.

Games foster collaboration, problem-solving, behavior change, and computational thinking (21st Century Skills). Our focus on how can games introduce various topics (learning experience - climate change, water cycle, energy, waste management), and improvement in learning through games playing. HRDEF inculcate, motivates students for science, technology, engineering, arts and design, mathematics (STEAM) for 21st Century Sustainable living through intelligent interactive learning systems.

HRDEF committed to establish processes aimed at educating for sustainable development (ESD), management of environment, water, energy, waste, climate change, and transport issues through involving children, youth, and elders using ICT. HRDEF conduct workshops for teachers, students, community members, and after-school program on the above, participants played Board games on water, energy, disasters, Card game on medicinal plants learning (healthy living), technology supported games, Apps on SDGs, COVID-19, hands-on activities, quiz, model making, projects and other creative forms of expressions increased players motivation towards science, SDGs, and sustainability. Thus, through ESD we are providing transforming learning environments, building capacity of educators, and empowering youth on a local level.

Background

Why are games important and we develop, study games for learning? How does research into games help us better to design games that help everyone to change our self and things around us for better sustainable development? We know role of games in our life but not able to utilize the power of games for Sustainability, and SDGs. Thus, discussion on educational games and hands-on activities for SDGs learning, and building sustainable living in the present pandemic time is very crucial for everyone. **HLPF 2021 forum** theme states that “Sustainable and resilient recovery from the pandemic that promotes the economic, social and environmental dimensions of sustainable development: Therefore, through games and hands-on activities building an inclusive and effective path for the achievement of the 2030 Agenda in the context of the decade of action and delivery for sustainable development” with SDGs 3, 8, 10, 12, 13.

Participation

- Academic and research institutions
- Government agencies, organizations
- Civil society organizations, Social Enterprises
- Individuals, Game Designer

Speakers

Chris ‘Wombat’ Crowell, Game Designer and Creative Director, Crowell Interactive
Dr. Vinnie Jauhari, Director Education Advocacy, Microsoft Corporation (India) Pvt. Ltd.
Vignesh Mukund, Learning experience designer, Games for Learning, UNESCO MGIEP
Anant Bhaskar Garg, Director, HaritaDhara Research Development Education Foundation

AGENDA
JULY 14TH, 2021

High Level Political Forum Side Event 2021

07:30 - 09:00 AM (NEW YORK TIME)/ 05:00 - 06:30 PM (NEW DELHI TIME) Decade of Action, SDGs and Building Sustainability through Educational Games, and Hands-on Activities

7:30 AM - Welcome and Opening Remarks
Dr. Manisha, HaritaDhara

7:35 AM - Building Sustainability through Educational Games, Hands-on
Anant Bhaskar Garg, Director, HaritaDhara

7:50 AM - Conceptualization and Assessment of Education Games
Chris ‘Wombat’ Crowell, Game Designer

8:05 AM - Q/A & Polls

8:10 AM - Minecraft- A great approach for gamified learning, instituting 21st Century Skills
Dr. Vinnie Jauhari, Director Education Advocacy Microsoft

8:25 AM - Q/A & Polls

8:30 AM - Social Emotional Learning through Video Games
Vignesh Mukund, UNESCO MGIEP

8:45 AM - Q/A
Guests/Attendees

8:50 AM - Closing Remarks
Anant Bhaskar Garg

HaritaDhara Research Development and Education Foundation

Chris ‘Wombat’ Crowell is a former Game Designer and Creative Director with decades of experience in creating a wide range of globally known game brands such as NASCAR, SimCity, and The Sims. Chris now focuses on working with educators to create engaging and effective Game Based Learning experiences. Chris talked about guidelines for assessing educational games, medium of games, games paradigms especially educational, and learning goals. Further, he discussed on Piaget’s Stages of Development, Cognitive cycle of Play, learning flow, metrics, assessment, do, and don’t of games development.

Zoom Meeting

You are viewing Chris Crowell's screen

View Options

Recording Paused

Chris Crowell is talking...

View

CONCEPTUALIZATION AND ASSESSMENT OF EDUCATION GAMES

Why is this important?

Time

Copyright Crowell Interactive Inc.

Unmute Start Video Security Participants Polls Chat Share Screen Reactions More End

Participants (15)

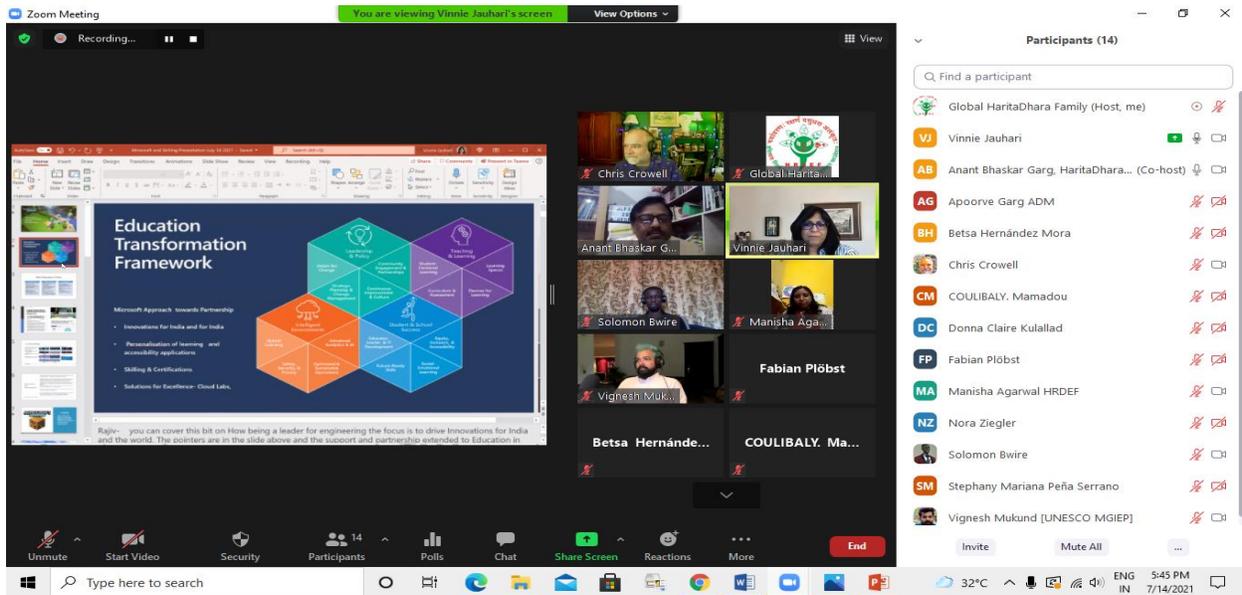
Find a participant

- Global HaritaDhara Family (Host, me)
- Chris Crowell
- AB Anant Bhaskar Garg, HaritaDhara... (Co-host)
- VJ Vinnie Jauhari
- AG Apoorve Garg ADM
- BH Betsa Hernández Mora
- CM COULIBALY, Mamadou
- DC Donna Claire Kulallad
- FP Fabian Plöbst
- MA Manisha Agarwal HRDEF
- NZ Nora Ziegler
- PH Prayanshi, HRDEF
- R rachaelwoolton
- Solomon Bwire

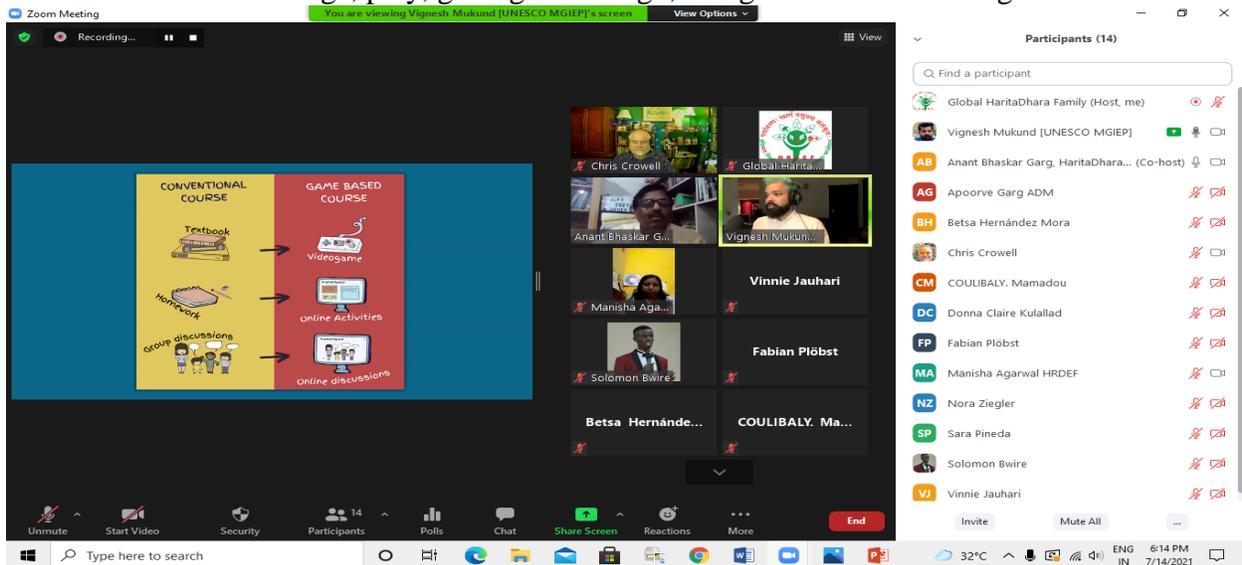
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Vinnie Jauhari is responsible for evangelizing Education initiatives at Microsoft. She leads and manages strategic engagements in Higher Education and K-12 and also works on policy issues related with education. Her contributions have won her recognition across several years at Microsoft such as Greg Butler Award in the world wide team for the year 2014-15. Dr. Vinnie discussed in details about Microsoft Minecraft Education Edition, Classroom lessons in different subjects, its stat about worldwide played in education, demo of a particular topic, and how to get started and connect through social media. She talked about Education Transformation Framework and other Learning tools.

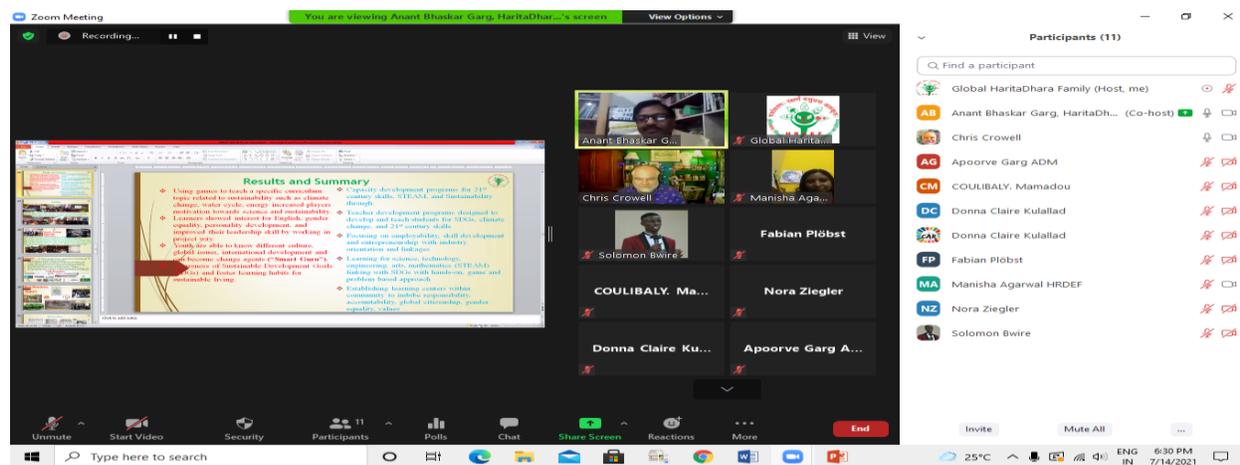


Vignesh Mukund is a learning experience designer with the Games for learning team at UNESCO MGIEP where he applies his multidisciplinary background to design innovative pedagogical solutions that leverage the best of video-games and technology to help cultivate critical-thinking and social emotional skills in learners. Vignesh discussed about education for sustainable development, global citizenship, EMC2- SEL Framework. Later, he discussed cognitive, socio emotional behavior change, play, good game design, and games based learning toolkit.



Anant Bhaskar Garg, published two books, 53 papers in Intl. Journals, Seminars, 2 chapters in Springer's book, Senior Member 2011 of ACM, USA. Climate Reality Leader, Regional #MentorofChange, AIM, NITI Aayog, Sustainability in Science Centers Fellow, and MIEE.

Anant talked about side event, and work, activities of the HaritaDhara, Work on ESD, SDGs, and HRDEF presented a Live Meeting on related topic on 18th May, 2021 and SDGs Marketplace Booth during the UNESCO World Conference. Why we need new paradigm for ESD, SDGs, and Climate Change Education. We are working on educational Games for Learning Sustainability Concepts, SDGs by Youth, Community for couple of years and presented our work at the TECH 2017, 2018 UNESCO MGIEP Global conference. We designed, developed games, hands-on activities for understanding difficult concepts related to sustainable development in an interactive way. To know role of games, hands-on activities to understand ESD, SDGs, we use games in schools, and after school program for students and youth in different settings as informal education for building sustainability concepts.



Educational Games and Hands-on Activities helps in

- ❖ Using games to teach a specific curriculum topic related to sustainability such as climate change, water cycle, energy increased players motivation towards science and sustainability.
- ❖ Learners showed interest for English, gender equality, personality development, and improved their leadership skill by working in project way.
- ❖ Youth are able to know different culture, global issues, and international development and can become change agents ("**Smart Guru**").
- ❖ Awareness of Sustainable Development Goals (SDGs) and foster learning habits for sustainable living.
- ❖ Capacity development programs for 21st century skills, STEAM, and Sustainability
- ❖ Teacher development programs designed to develop and teach students for SDGs, climate change, and 21st century skills
- ❖ Focusing on employability, skill development and entrepreneurship with industry orientation and linkages
- ❖ Learning for science, technology, engineering, arts, mathematics (STEAM) linking with SDGs with hands-on, game and problem based approach
- ❖ Establishing learning centers within community to imbibe responsibility, accountability, global citizenship, gender equality, values

Game-Based Learning

Games that are planned and designed well will offer enough difficulty to keep it challenging while still being easy enough for the player to win.

- ❖ Game-based learning takes this same concept and applies it to teaching a curriculum. Students work toward a goal, choosing actions and experiencing the consequences of those actions. They actively learn and practice the right way to do things. The result is active learning
- ❖ HRDEF organized sessions on Climate change effects on disasters, water management, Earthquake, Landslides, Floods, SDGs, Pollution, Biodiversity, Energy, Waste Management session to segregate waste and turn it to composting.
- ❖ All activities are based on school curriculum that improve knowledge and encouraged students to prepare models with waste materials.
- ❖ Project allocated in groups to students with mentoring of teachers to develop sustainable school with Eco-club for learning climate change.
- ❖ Students played games, card game, and board game on save energy, save water. Conduct survey on environment awareness and motivated to do good acts/deeds as per Ministry of Forests, ECC campaign.
- ❖ Further, it will help to improve child communication skill, encourage problem solving approach, and develop creativity with hands-on activities, projects, making science card, quiz, and painting to develop 21st Century skills.
- ❖ Students enjoyed hands-on activities to make paper bag, bin from old newspapers to reduce polythene waste and they showed better understanding of topics, and how to reduce effects of climate change, its link to disasters.
- ❖ Small steps can bring change and foster learning habits for sustainable living

HRDEF is using games, projects, and hands-on approaches for interactive learning. We are addressing issues of quality learning and sustainable development through Information and Communication Technology (ICT), hands-on activities in a curriculum-based way supported by research inputs and driven by a new learning paradigm based on cognitive science, neuroscience, AI, makers approach. A way forward Education now needs more participatory, community-oriented accountability to shape Generation Z's future with sustainability in mind to create "Sustainable Consciousness." Information and communication technology should be used as a tool for change, transparency, and data validation. Young people can be driving forces for sustainability and act as agents of change for responsibility, accountability, global citizenship, gender equality.

Experiential, Embodied Learning for Sustainable Development

How do we learn? As a child we learn by exploring, by touching things, moving things and taking things apart. This is really an experiential way of learning i.e. learning by doing. But in school's classroom, we sit down quietly, without moving, talking or playing. Making as a construction, DIY process provides various insights, knowledge about our surroundings, and actively participate in enjoying transformative learning. Playing games, making provide entertaining, fulfilling experience of doing, creating new things, have many advantages for students, as it makes the player, a decision maker, facts investigator, evaluating strategy, prioritizing their actions and abilities.

Integrated, hands-on, project, game based learning that incorporates technology is crucial for the 21st Century Skills. MAKER (Manufacturer, Author, Knowledge analyst, Exhibitor, Recycler),

Project, Game based learning provides new emerging way to understand difficult concepts and further it provide opportunities for students, learners to experience the phenomena. Therefore, it promote interactive, experiential learning that help learner to develop creativity, critical thinking, collaboration, and problem solving that are essential for the 21st Century skills. Thus, to learn a concept, its understanding, and practice involve different steps such as exploration, curiosity, asking question, discussion, create, design thinking, making model, games, role play, drama, story, and present (Scott, 2015).

TABLE 1 List of Game Played for Learning Sustainability Concepts

Game	Subject	Learning outcome	Impact
Disaster Risk	Geography, SDG 13	UNDERSTAND different types of disaster, causes, prevention, and safety	Knowledge of prevention, safety before and after disaster
Medicinal plants	Life science SDG 3,15	Understand medicinal plants and their uses	Identified 20 plants
Water is precious	Science, SDG 6	Knowledge about water uses in different places	Awareness on water conservation and pollution
Why Biodiversity important?	Life science SDG 13, 14, 15	Understand ecosystem and importance of different animals, plants, insect role	Effects of biodiversity on human
Waste cycle	Science, SDG 13	Hands on activities shows waste cycle	Recycle, reduce, reuse, rethink of waste
Sustainability Climate Action	Science, Math SDG 4, 13	Calculate Water, Energy, Waste Audit	Understand Climate change connect with daily life

Games can introduce goals, interaction, reaction, problem solving, competition, chronicle, and fun learning environments, elements that can increase learner engagement and motivation. For example, climate action and education through games and hands-on activities can build sustainability knowledge for the SDGs and sustainable living.

HLPF 2021 Side Event Guiding Questions for presentations and discussion

- ❖ How does research into games help us better to design games that helps everyone to change our self and things around us for better sustainable development?
- ❖ We know role of games in our life but not able to utilize the power of games for Sustainability, and SDGs.
- ❖ Thus, dialogue on educational games and hands-on activities for SDGs learning, and building sustainable living in the present pandemic time is very crucial for everyone
- ❖ Other aspects are about Teachers, learners, education level and the impact of using games to promote STEAM, ESD in young people and children

Moderator, Facilitator

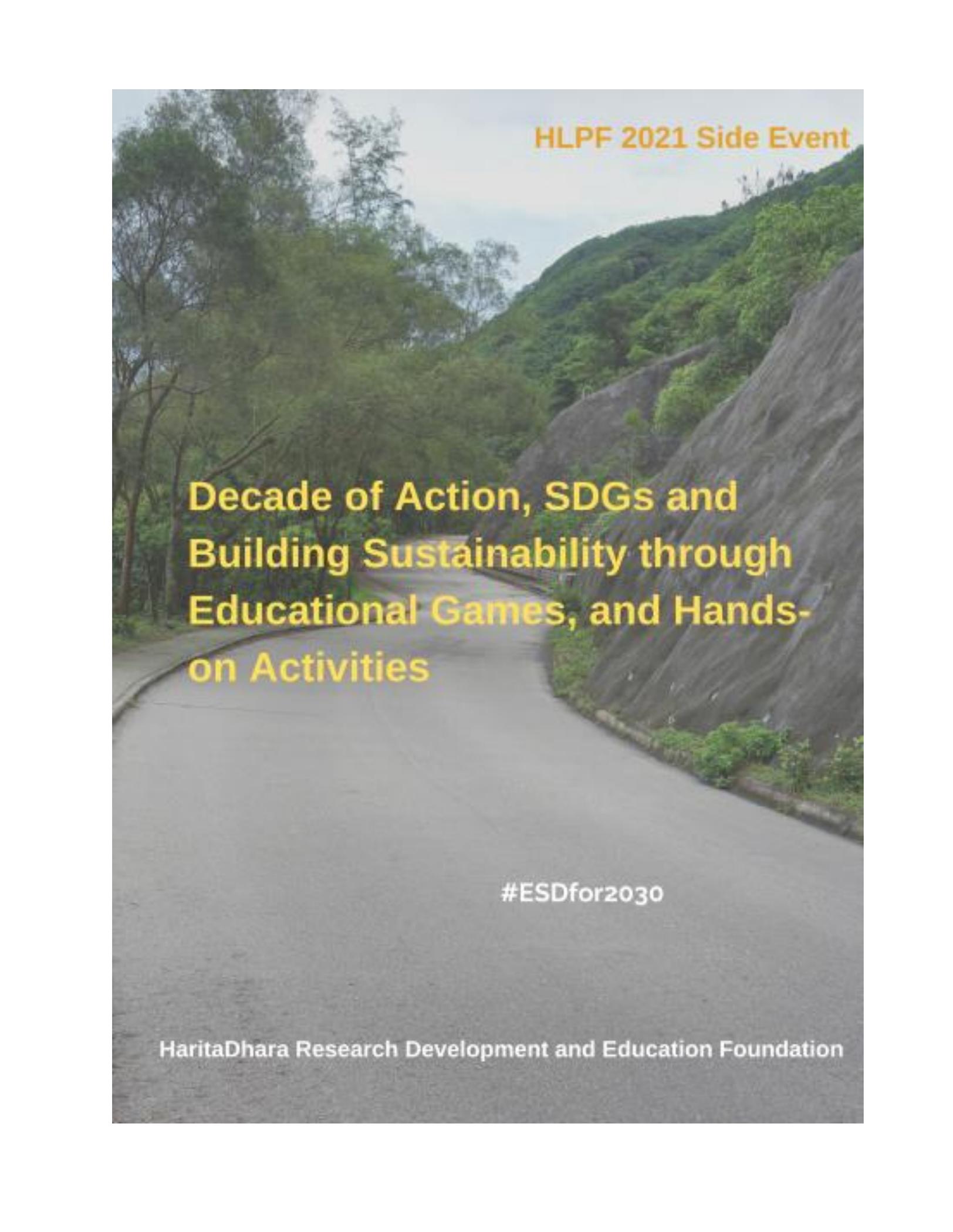
Manisha Agarwal, Director, HRDEF, Educator, PhD from Forest Research Institute University. Involved in environment education, climate action, STEAM teaching, raising awareness and skills development

Prayanshi, Youth Coordinator, She has developed apps on SDGs, Eight Elements of Sustainable Living, Covid information, Climate Change, Disasters and health.

Games foster collaboration, problem-solving, behavior change, and computational thinking (21st Century Skills). Our focus on how can games introduce various topics (learning experience - climate change, water, energy, waste management), and improvement in learning through games playing. Thus, through ESD, we are providing transforming learning environments, building capacity of educators, and empowering youth on a local level. Join UNESCO's call for education to change so that we can all act for our planet's survival. [Connect with us](#) and share your views for transforming learning environments with innovative ESD approaches, initiatives, and exploring projects for SDGs with quality learning through ICT, Games based, and hands-on activities.

Vote of Thanks

- ❖ We are very much thankful to HLPF secretariat and NGO branch to give this opportunity.
- ❖ We are very much thankful to our esteemed speakers to give their wonderful talks.
- ❖ We would like to express our gratitude to all guests, who have join us online from various countries.
- ❖ Thanks to HRDEF team to successful for the event.



HLPF 2021 Side Event

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Building Sustainability through
Educational Games, and Hands-
on Activities**

#ESDfor2030

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