

### **DESIGNATHON WORKS PRESENTS:**



**GLOBAL VOICES OF THE NEXT GENERATION** 



September,



Global Voices of the Next Generation: 'Our Planet, Our Future!' *Global Voices of the Next Generation* is a research initiative linked to the Global Children's Designathon. The initiative researches the knowledge and opinions of children in 21 countries worldwide on climate change and related issues.

The Global Children's Designathon is the annual event of non-profit organisation Designathon Works. The event encourages children from all over the world to think about environmental problems and to design and build their own inventions to prevent these problems locally or globally.

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Designathon Works is a non-profit organisation based in Amsterdam, the Netherlands. Its mission is to empower children to design a better world.

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### FOREWORD



In 2014, when the first Global Children's Designation took place, with 5 cities participating, Nairobi, Amsterdam, Berlin, Dublin and Rio de Janeiro, it was a dream come true. As the initiator of the Global Children's Designation, the opportunity to facilitate with like minded partners, to witness the creativity, ability and engagement of children to tackle complex global problems and see them shine while presenting their solutions was

priceless. Children from multiple geographies and contexts showing they could all design a better world. Since then this annual global event has spread to 45 cities and counting. We have tackled the SDGs transversally with themes such as Circular Economy in 2016, Clean water for everyone in 2017, Deforestation in 2018, Food and Climate Action in 2019 and Clean Energy for all in 2020/2021.

With the 2022 edition of Global Children's Designathon we aspired to tackle the climate crisis head on. In so doing we found ourselves faced with the enormity of the task to balance our responsibility towards the children and their imaginations in the face of this existential threat. On the one hand we have the brilliance of children; their empathy for life and their basic need to be able to envision a good future. While on the other hand we have the onslaught of bad news and future scenarios that is the climate crisis. Where is the hope for the children's imaginations to move toward? When humanity hasn't reached any of the Paris agreement targets and all the science is telling us that if anything the warming of the earth is proceeding faster than expected. The IPCC 2022 report states:

"The scientific evidence is unequivocal: climate change is a threat to human wellbeing and the health of the planet. Any further delay in concerted global action will miss the brief, rapidly closing window to secure a liveable future."

How does one tell youthful, curious minds that their futures will almost certainly be tormented with extreme weather events, that currently already both animals and children are starving in the horn of Africa due to drought, that the warming of the planet will mean that many birds, insects and animals of which they are in awe may not survive. What creative question can we ethically propose to the children?

The breakthrough came with the discovery of UNEP's 'Generation Restoration', with its mission to prevent, halt and reverse the degradation of ecosystems worldwide. By taking this angle

we could connect the children to an ecosystem they care about and invite them to imagine its restoration and ways to support it. Through the support of ecosystems they become again able to sequester carbon. Finally a way forward. The creative question to the participating children in the 21 participating countries became:

'How can we tackle climate change through ecosystem restoration?' using the strategies: Reimagine how and what we consume; Restore nature; and Re-educate ourselves and others. The wonderful thing about this approach was that it offered paths towards possible and beautiful futures. It spoke to our ability as humanity to work with nature instead of against it.

In this report you will find alongside the portraits of partners, the methodology used for the research, but most importantly that through this Global Designathon process the children have found radical hope and solutions, for how we as humanity can collaborate with all the other living beings on earth. Together we have seen that there is very much a better world when we work together from this perspective of equality.

I am very proud of the Designathon Works team, the partners we work with and the wonderful children who show us through their fearless ingenuity that with them there is very much hope for a better world for people and the planet.

Emer Beamer Founder, Designathon Works



# ACKNOWLEDGEMENTS

First and foremost, we want to thank all the 2500+ participating children! Without their participation we would not have been able to capture their fascinating voices and ideas. Secondly, we owe a big THANK YOU to all of our 22 host organisations and their teams! We would like to extend a special thank you to our hosts in Tanzania, Chile, Ireland, and The Netherlands for conducting post-GCD surveys that provided us with deeper insights into the skills development and education outcomes of the Designathon method.

Furthermore, there would be no GCD without the help of our trusted partners and funders, who each in their own way support Designathon Works and the GCD. Their support ensures the annual recurrence of the event and allows children's voices to be heard, not just in the Netherlands but around the world.



## **ABBREVIATIONS**

- DW Designathon Works
- GCD Global Children's Designathon
- Sustainable Development Goals SDGs
- UNICEF United Nations International Childrens's Fund
- HaritaDhara Research Development and Education Foundation HREF
- SHEF Study Hall Educational Foundation
- MCL Montreal Centre for Learning Disabilities



## **EXECUTIVE SUMMARY**

The climate crisis is an issue with many dimensions. It is intrinsically interlinked with other global Development challenges around poverty, education, gender equality, food security, and health. As a result, children around the world experience climate change in very different and nuanced ways. Their proximity to climate risks such as droughts and flood events, their household incomes, level of education and access to nutritious food, their ability to access quality health-care and other basic services, as well as their socio-cultural and economic relationship with nature, all affect the ways in which they experience climate change.

Children around the world should be at the Centre of the battle against climate change, through education, as they stand to inherit increasingly complex and unprecedented development challenge in the face of climate change. Climate change education therefore, needs to be responsive to the highly localised experiences of children from different parts of the world. We need a better understanding of the ideas, solutions, hopes, and fears of children around the world to inform climate change decision making that supports their ability to navigate new climatic realities and an increasingly complex world. The ability to think creatively, tackle complex problems, and contribute to global sustainability are essential 21st century skills. However, the majority ofchildren never get the opportunity to develop these abilities within a formal classroom setting.

The Designathon method focuses on building the inner abilities of all children, regardless of their gender, race, class, skill-level or learning environment. Children gain knowledge on the United Nations Sustainable Development Goals (SDGs) and develop 21st century skills to collaboratively develop new solutions, use new technologies and take action! It recognises that all children can and want to contribute to building a better world.

The Designathon Works Foundation develops these skills in children (8 to 12 years old) helping them design solutions for a more just, equitable, and sustainable world. By participating in a Designathon workshop, many children discover that they have the power to shape the future, and connect their local experience to global development issues such as climate change, poverty and gender inequality.

Since 2014, Designathon Works has hosted an annual Global Children's Designathon (GCD) - a platform dedicated to celebrating what the world could be like when children are put in charge

of designing better futures for people and the planet using new technologies. The GCD is also a call for changemaker education on a global scale. This platform allows children in countries all over the world to work simultaneously on developing their own ideas and building prototypes. The theme of the 2022 GCD, "Our Planet, Our Future!" provided children with a creative space to learn about the main cause of the climate change crisis and how it affects the planet. Children were encouraged to think critically about the relationship between humans, the land and other living things and to find solutions to the climate crises through ecosystem restoration. Through their participation in the 2022 GCD, a total of 2500+ children have developed their changemaking skills and have learnt about climate change and the effects of environmental degradation, ecosystems and the need for restoration, as well as how to educate themselves and others on these issues.

We believe that this knowledge and 21st century skills will allow children to better navigate the complexities of a changing world and build a more sustainable future. While our annual GCD's help to build the knowledge and skills of children, they also represent an opportunity to listen and learn from children and to amplify their voices at the local, national and international level!

This document is the 4th edition of the Global Voices of Next Generation Report which provides readers with key insights on the hopes, ideas, experiences and concerns of children around climate change and the ecological future of our planet.



### **Key findings**

The main messages of the Global Voices of the Next Generation on: Our Planet, Our Future! research are summarised in the following 7 key findings:

- 1. Out of the 475 children participating in the research, 79% expressed a high level of concern about climate change, 20% said they were a little worried, and only 1% were not worried at all.
- Children around the world are significantly concerned by litter and waste management challenges with 18% of all children participating in the research, prioritising this issue as a key ecological concern. This was followed by ocean pollution (14%), deforestation (11%) and biodiversity loss (10%).
- The majority of children participating in the research (50%) developed engineering solutions to address ecological and climate change related concerns. This was followed by robotic solutions (25%) and awareness campaigns (15%) aimed at addressing climate change and restoring ecosystems
- 4. Children across all participating countries were highly aware of the need to reduce our reliance on non-renewable energy. Of the children who chose renewable energy to drive their innovations, 80% chose solar as the main energy source.
- 5. 36% of children chose to restore ocean ecosystems, while 22% chose rivers ecosystems and 16% chose forests ecosystems.
- 6. Children perceived climate change as a direct threat. 77% of children participating in the research felt that climate change would personally affect them and their families, 21% stated it would only affect them a little, and only 2% felt that it would not affect them at all. 100% of children participating in the research from Sri Lanka, Nigeria, Mexico, Kenya, Iran, India, and Chile felt that they would be directly affected by climate change. In the Netherlands, 65% of children felt that they would be directly affected, and in France, only 43% of participating children felt that they would be directly affected in a major way. The lowest levels of concern were expressed by children in Vietnam and Malta where 28% and 21% of children stated that they would be directly affected by climate change in a major way.
- 7. In targeted surveys with children in the The Netherlands, Ireland and Chile, we asked participants whether they felt more or less hopeful about climate change and the future of their planet after participating in the GCD. 100% and 77% of children in The Netherlands and Ireland respectfully reported feelings of increased hopefulness after the Designathon workshop. In addition, 100% children from The Netherlands, and Ireland and 83% from Chile felt that the work they did throughout the GCD would help create a more sustainable future.

Throughout the GCD and compilation of this report, we have become increasingly aware of the need for deeper inquiry into children's perceptions and experiences linked to climate risk. While this report (and its previous iterations) provides insights into a significant sample of children from across the world, a better understanding of the needs of 2 billion children around the world has to be prioritised in climate change decision making.

Through our work with children in over 45 countries, we have developed a strong track record in child-centred, problem-based learning. This approach has proven to be a highly effective tool for including children in decision making processes that affect their lives. We have also learned that children have a wealth of creativity and innovative thinking that can be leveraged to identify blindspots and new ways of thinking about complex development challenges. In this sense, climate and sustainability education that includes problem-based learning techniques, can be used by decision makers as a platform for community listening and further inquiry into the lived experiences of children.

The 21st century skills that develop as a result of this approach, result in future ready children that are equipped with the core capacities to navigate the fourth industrial revolution. This is evident in the types of designs developed by children through the Designathon process. These tend to focus on high tech robotic solutions to climate change and other ecological problems. In addition, and perhaps most importantly, our approach has created high levels of action-oriented hope amongst participating children. At the end of the day, it is this hope that will drive changemaking for a better, more sustainable future!



# **ABOUT THIS REPORT**

Drawing on insights from our GCD 2022, this report is a collection of children's voices from around the world. It provides insights into the hopes and fears of children as well as their ideas on how to build a more just, equitable and sustainable future. The aim of the report is to provide decision makers at the community, city, national and international level with insights into children's experience of the world, the issues they prioritise and the support they need to emerge as a generation of changemakers committed to building a better future. Out of the 2500+ children participating in the GCD 2022, The report zooms in on the experiences of 475 children from 18 countries. In addition, we have placed a further focus on four countries - Tanzania, Chile, Ireland, and the Netherlands - to further our learning on the Designathon Method as an effective tool for deepening thematic knowledge and inspiring action.

The report is structured into three main sections. Each section includes both comparative and narrative data on how children view climate change and ecosystems. This includes data which explores the differences and similarities in the ways children view and experience climate change and ecosystems from different parts of the world. It also includes quotes, stories, and pictures from the Global Children's Designathon 2022.

Part 1 focuses on how, when, and why we amplify the voices of children from around the globe It includes details on the Global Children's Designathon event and the methodology used to facilitate problem-based and design-driven learning around the theme, "Our Planet, Our Future!". It also includes an overview of the methodology used to collect data during the designathon and the ways this data will be used to inform decision making at the local and international level.

#### Part 2 focuses on amplifying the voices of children around the world

The section includes key insights into our research findings and explores the similarities and differences between the way children view and experience climate change and ecosystems around the world. It includes insights into the hopes and fears of children, the ecological issues they prioritise, and the types of solutions they have to these issues. It also provides recommendations on how to further amplify children's voices.

Part 3 focuses on the Designathon Works organisation and what we need to scale our impact The section provides an overview of the Designathon Works strategy and areas of growth as well as details on how potential partners and collaborators can become involved in the work we do. It also provides details on our existing Global Children's Designathon host organisations and the individuals involved in making the 2022 GCD a success.



# PART 1: HOW, WHEN AND WHY WE AMPLIFY THE VOICES OF CHILDREN

## **CHAPTER 1: OUR PLANET, OUR FUTURE!**

- 1.1 Global Children's Designathon at a glance
- 1.2 Global Learning & Exchange Week
- 1.3 Linking the GCD to the SDGs

# **CHAPTER 2: DESIGNATHON METHOD**

2.1 The Designathon method at a glance



PART 1: HOW, WHEN & WHY

# CHAPTER 1: OUR PLANET, OUR FUTURE!

### 1.1 Global Children's Designathon at a glance

Each year, Designathon Works brings together children from across the world to reimagine what a more equitable and sustainable future might look like. This year, 2500+ children and over 20 trail-blazing designathon hosts committed to re-imagining the way we see our children. Under the GCD theme 2022: Our planet, Our future! we explored the current climate change crisis that threatens the future of life on our planet and invited children to re-imagine our relationship with the earth and living systems. During the GCD 2022, children explored the science behind climate change and environmental degradation and were given a platform to think creatively about solutions to these.

The GCD 2022 was launched on the international day of education on the 24 January 2022. Designathon Works, together with GCD hosts and children from participating countries worldwide came together in an online launch event and participated in a Q&A session with inspirational speakers such as Marco Lambertini (the director of WWF) and Ayakha Melithafa (a young South African environmental activist). The launch also provided a space for children to express their own thoughts, ideas and concerns, and to explore solutions to the climate crises.



Figure 1: GCD Participants 2022

Over the course of four months, classrooms and other places of learning around the world, built their knowledge around the main causes of the climate change crisis and how it affects the ecosystems at both a local and global scale. By using an ecosystems approach, children could explore the relationship between people, animal, and other living organisms as well as the land, air, and water that make up an ecosystem.

Topics included climate change and environmental degradation, ecosystems and the need for restoration, and how to further educate ourselves and others about these topics. This culminated in a final event on the 9 April 2022, where finalists from each country further developed their ideas into a prototype! Finalists were assisted by the Designathon Works team to use simple technologies to make their ideas a reality.

### Global impact

The GCD took place in 21 countries around the world. It included some first-time participating countries such Chile, Mexico, the DRC, Sri Lanka, Iran, and Malta and other long-term participating countries such as Nepal, Tanzania, Canada, China, France, Ghana, India, Ireland, Cote d'Ivoire, Kenya, Nigeria, Serbia, Sweden, the Netherlands, and Vietnam. The number of participating children varied considerably across countries with some countries such as Serbia including 400 children and others such as Canada and Chile choosing smaller groups of children. The Covid 19 Pandemic continued to affect these numbers, but we remained flexible and several countries such as Vietnam, Mexico and China delayed their events due to the effects of the pandemic. However, these countries still managed to partner with one another to ensure exchange between groups of children in different countries.

The GCD continued its work to provide an inclusive learning method for all children regardless of their race, class, geographic location, gender, or ability level. In Canada, the method was adapted to include children with learning difficulties, ADHD and/or mild autism. Held over one day, the Montreal event focused on children with special needs, but was open to children who are compassionate about supporting their friends, family or generally, contributing to more inclusive learning. In Chile, the GCD included 30 children from a vulnerable school in Providencia. In the DRC, 25 girls from the Lubumbashi were activated as pioneers in taking care of ecosystems in the kalebuka community as well as in DRC. In Ivory Coast, children from coffee growing families where given the opportunity to reflect, propose solutions, and amplify their voices. In Mexico, a focus was placed on integrating children from diverse background with 30 children participating from Camelot School in Guadalajara City, and 60 children from Citac - an NGO based in a rural community in Tapalpa, Jalisco, and 9 children from Chiapas.

One of the greatest achievements of the GCD is its ability to connect global challenges such as climate change to the localized lived realities of children. In India, we partnered with HRDEF's

as the organisation in Dehradun where the GCD included raising awareness around disaster risk reduction and capacity building within the community. In Malta, the GCD focused on cleaner ways in which we can generate electricity, water conservation, and plastic pollution in our oceans. The GCD also drew on the expertise of environmental focused organisations working with children for a more sustainable future. In China, the GCD was held on the FanPu farm, an eco-friendly farm in Chengdu. In Ireland, the GCD was embedded into the Eco-Schools programme - an international accredited, long term programme, for environmental and sustainability education.



The Designathon method encourages children to develop both tech driven and analogue solutions to climate change, using the resources available to them in innovative ways. In Iran, the GCD was engineering focused with their event being held on March 4, coinciding with World Engineering Day for Sustainable Development and held in the Irancell Academy at the Sharif Innovation Station with sponsorship from Rahyab Melal, a civil engineering company. We have enjoyed seeing the innovative tech tools being used by educators in France, where a graphic facilitator and a videographer brought the ideas of children to life throughout the day. While engineering focused solutions dominated the types of interventions designed by children, some children also developed innovative campaigns and other social interventions such as the customer reward systems designed by children in Mexico, or the public awareness campaigns designed by children in Nigeria and Malta.



The GCD 2022 included a Global Learning & Exchange Week (GLEW) - one week dedicated to learning, sharing, and taking action to tackle climate change. Children (aged 8-12) and their educators benefited from inspirational talks from youth and industry leaders and learning and exchange opportunities to further develop their ideating, sketching, prototyping and pitching skills. During the GLEW, children from The Netherlands, DRC, and India exchanged their ideas, hopes and aspirations in the Exchange sessions of the Global Learning and Exchange Week and classrooms in France and India came together to promote peer to peer learning. The Learning and Exchange Week was a massive success, with educators across the world witnessing an increase in content knowledge from their learners after participating in the event.

The Global Learning & Exchange Week emphasized all the extraordinary elements of the GCD! The week consisted of multiple online sessions across different time zones. The GLEW was divided into four blocks - Learn and Inspire, Exchange, Do, and Gather.



Learn & Inspire: This session provided more indepth content on climate change and ecosystem restoration.



Exchange: The exchange session provided a space for children to connect with other classrooms across the world and exchange their learnings, ideas and concepts with each other.



Do: The Do session allowed children to build further skills on visualizing their ideas.



Gather: The Gather sessions was celebration of the Global Learning & Exchange Week, bringing together all participating children, their knowledge and learnings.

### 1.3 Linking the GCD to the Global Goals

With a strong foundation in problem-based learning, the Designathon method applies design thinking to the Sustainable Development Goals (SDGs). While the theme, "Our Planet, Our Future!" focused primarily on SDGs 13, 14, and 15, the theme (as well as the children's innovative ideas that developed under it) touched on several other SDGs including SDG 7: Affordable and Clean Energy, SDG 4: Quality Education, and SDG 10: Reduced Inequalities. We believe that the Designathon Method provides children with the tools to engage with the SDGs and their targets in an accessible and child-centred way. SDG 4 on education is also a cross-cutting theme across all our GCDs.



The theme, Our Planet, Our Future! included accessible science around renewable energy and the effects of non-renewable energy sources on our ecosystems and climate. This resulted in a high level of consciousness amongst participants around the need for renewable energy.



The GCD provided children with accessible climate science while drawing insights on the ways in which children percieve and experience climate risk



The theme, Our Planet | Our Future included content on ocean ecosystem restoration and the need to protect our oceans. This resulted in a total of 34 innovative designs to rehabilitate or protect our oceans.



Restoring ecosystems was established as the key solution path to tackling climate change related issues in the GCD 2022.



PART 1: HOW, WHEN & WHY

# **CHAPTER 2: THE DESIGNATHON METHOD**

### 2.1 The Designathon method at a glance

During a designathon, children aged 8 to 12 years old invent, build and present their self-devised solutions to a social or environmental problem around one or multiple Sustainable Development Goals of the United Nations. Through the workshops, children gain knowledge on the SDGs and develop 21st-century skills, such as creativity and technological literacy.

#### Focus of learning:



### Why do we work with the Sustainable Development Goals?

The United Nations (UN) has established goals to unite the world in tackling the pressing matters we are currently facing, categorised into 17 Sustainable Development Goals1 (SDGs). The SDG target is set for 2030, which means that in the coming 10 years we will have to find ways to reach these goals effectively. The realisation of the SDGs requires cooperation, collaboration and partnerships. In this process, we believe that it is essential to involve all generations, including children, in finding solutions to the problems. At Designathon Works we know that the application of theoretical knowledge to real world problems creates a much stronger learning incentive for children. It is about connecting to the children's innate curiosity, as well as their empathy to make the world a better place. We use the SDGs as a source of inspiration for our workshops, meaning we create child friendly content by combining the different SDGs into a specific theme. Furthermore, educating children on the SDGs empowers children to become changemakers and educate others around them. However, we do not only contribute to the SDGs through our themes. As an organisation, we also play a role in achieving SDG Goal 4: Quality Education, since we aspire to develop future-ready education for children all over the world.

<sup>&</sup>lt;sup>1</sup> For more information on the SDGs: https://www.un.org/sustainabledevelopment/

# **PART 2: THE RESEARCH**

# **CHAPTER 3: RESEARCH METHODOLOGY**

- 3.1 Using the Designathon Method as a community listening tool
- 3.2 About the research participants
- 3.3 Data collection tools
- 3.4 Using this report to amplify children's voices

# CHAPTER 4: WHAT WE HEARD FROM OUR YOUNG CHANGEMAKERS

- 4.1 What are the priority areas of intervention according to children
- 4.2 Radical hope: what children think we can do!
- 4.3 How children want so solve climate change and restore ecosystems



PART 2: RESEARCH

# **CHAPTER 3: RESEARCH METHODOLOGY**

### 3.1 Using the Designathon Method as a community listening tool

Our Designathon method has also been used as a community listening tool to amplify the voices of children in local and international decision making. Each stage of the Designathon process can be used to collect insights on the priorities, concerns and aspirations of children. We have communicated these insights in previous Global Voices of the Next Generation reports, but have also worked with local governments to integrate children's voices within their urban governance frameworks. The Designathon Method can be used to stimulate debate and critical thinking around social issues.

Through student-centred, problem-based, and design-driven learning key insights can also be drawn around the social issues prioritised by children, how they define and experience these social issues, and how they wish to address them. In addition, the solutions that children develop during a Designathon provides insights into the intervention areas they prioritize, their hopes and aspirations for the future, and how they assign responsibility in the actions required to development challenges. Each stage of this critical making process presents opportunities to amplify the voices of children.



Inspire: In this stage problems are identified and prioritised. The researcher can gain insight into the major concerns of children, how hopeful they are that these concerns can be dealt with, and how they link local social challenges to the neighbourhood, city, national, and global scale.

Research: At this stage, children gain further knowledge on the problems they have prioritised. Researchers therefore gain insights into the information sources that children prefer/have access to; how children navigate information and knowledge frameworks, as well as the types of data that they use to inform their decision making.



Ideate and Sketch: During this stage, the researcher can draw insights into types of intervention areas that participants prioritise and the tools they use to do so, the level of cooperative capacity amongst participants as well as other skills required for active citizenship.



Make: During this stage, participants are tasked with making prototypes of their solutions. The types of technology used and the imbedding of prototypes in social realities (from abstract to deeply embedded and practical) can all provide valuable insights to researchers.



Show: In this stage, participants communicate their ideas to an audience. What they communicate, how they do so and to whom, provides insights into the real and perceived sphere of influence of children, who they assign responsibility to, and how they position themselves in influencing decision making.

### 2.3 About the research participants

A total of 475 children from 18 countries across the world participated in the research project. We received feedback from children living in Africa, Asia, Europe, North America and South America. Due to our location in the Netherlands, the largest number of research participants came from Europe (Malta, France, The Netherlands, Spain, Ireland, and Serbia), followed by Africa (Nigeria, Côte d'Ivoire, DRC, Tanzania, and Kenya), Asia (China, India, Iran, Sri Lanka, and Vietnam), South America (Mexico and Chile), and North America (USA).

Figure 2: No. of children participating in the Global Voices of the Next Generation research project



### 3.3 Data collection tools

We collected data at various points across the GCD process. There were three main data collection tools used - ideation and sketch sheets, surveys with teachers, and surveys with children in target countries.

Ideation and Sketch sheets: The sketch sheets were the primary source of data collection for this report. Through the ideation and sketch sheets, we were able to draw insights on the ecological issue prioritized by children, the ecosystems they chose to focus on, the types of solutions developed as well as the technologies used to respond. The ideation sheets also included a question on what children's main concerns were.

Surveys with teachers: During the Global Learning and Exchange Week component of the GCD, teachers were asked about their participation in the event and how their learners experienced it.

Surveys with children: In these surveys, children from Chile, the Netherlands, and Ireland, participated in a more in-depth survey around their participation in the GCD and the level of knowledge on ecosystems restoration and climate change. In these focus countries, children were asked about the following questions to further stimulate their critical thinking and problem solving capacity.

- Question 1: Do you feel like the work you did today will help to build a better future and how?
- Question 2: What was the best part about today?
- Question 3: What was the best part about working in groups?
- Question 4: What was difficult about working in groups?
- Question 5: What is an ecosystem?
- Question 6: Can you name one way that restoring ecosystems can help tackle climate change?
- Question 7: An ecosystem is a relationship between plants, animals, and other organisms, as well as weather and landscapes. All these things work together to form a bubble of life. Which of these parts of an ecosystem did your idea help?
- Question 8: Can you think of a small ecosystem in your city? Use some key words to describe it
- Question 9: Do you feel more hopeful about restoring our ecosystems and solving climate change?

This report overlays data from these three sources with research and analysis from academic and grey literature (policy documents, NGO briefs etc) to better understand the experience of children from around the world in relation to climate change and ecosystems decline.

#### 3.4 Using the report to amplify childrens voices

The report has multiple audiences at different scales. This includes applications of the report at the very local level (schools, community-groups, households), city, national, and international levels. The table below provides recommendations on how the report can be used at various influence levels and by diverse actors. However, it is not an extensive list of where, how and when the data in this report can be used to amplify children's voices and we welcome further suggestions as to how this can be done. In addition, we encourage readers to see the report as a resource tool - to be tailor-made and adjusted to their specific, local advocacy needs.

- Teachers can use the report to inform their climate change lesson planning. This includes, the addition of more global citizenship skills into their curriculum's by linking local experience to global data and narratives.
- The report serves as a benchmark around which further advocacy can take place. It
  references international best practice, universal child rights, and various examples on how
  children's voices can be included in decision making processes around climate change.
  Community-groups can build on this to build their own advocacy strategies.
- Insights from the report can be used by host organisations to further advocate for problembased and child-centrred learning. The report can be referenced as evidence of the impact of these approaches in order to mobilize further resources for their work. The report also provides a track record of their work as well as an opportunity to network and learn from similar organisations.
- Local governments can use the report to inform their education decision making, but also to mainstream children's voices across the board. It provides a framework of questions, topics, and concerns that are child-focused and can be used to design further citizen outreach activities. Due to both country specific and comparative data, the report allows local governments to both benchmark the experience of children in their own countries as well as draw insights from other geographies.
- Similar to local governments, national governments can use the report to identify innovative ways of engaging children and mainstreaming their ideas into decision making processes. It can also provide insights on priority areas of development to further investigate in their countries to be more responsive to children's needs and concerns in the face of climate change. The innovations developed by children in their countries can provide governments with potential areas to further invest in and to inspire action amongst the general population. Child-focused international development actors can use the report to further inform their country specific and multi-country programming. The report can highlight areas of concern to further investigate in order to inform the targeting of interventions and the Designathon Method can be used to further understand the needs of their target communities.



PART 2: RESEARCH

# CHAPTER 4: WHAT WE HEARD FROM OUR YOUNG CHANGEMAKERS

We were greatly inspired by the ideas and innovative thinking of children participating in the Global Children's Designathon. They shared their concerns and fears with us in a way that inspired radical hope for the future. Embracing the difference and similarities in what children shared with us is the essence of this report, an approach that we believe is essential to more child-focused and responsive climate action. This nuance matters, because the effects of climate change will not be experienced uniformly around the world. Mid-latitude countries will experience the highest levels of warming (Buis, 2022). These countries house 50% of the world's population and are often the most vulnerable in terms of poverty, health and other development challenges. These countries also emit the least amount of greenhouse gasses - a great climate injustice for those living in these parts of the world.

This section of the report provides key insights from children participating in the GCD 2022 and contexualises their experience within a global and local policy context, the latest scientific consensus, and global climate change decision making processes. It aims at stimulating further inquiry and deeper engagement in children's hopes and fears about the future of the planet rather than a comprehensive picture of their perceptions and experiences.

The impacts of climate change have been well documented in scientific literature. However, increased focus is being placed how to better understand the ways in which climate change risk is percieved, - and how these perceptions influences climate action. According to the IPCC, "consideration of risk perception and decision processes can improve risk communication, leading to more effective policies for dealing with climate change" (IPCC, 2021). It is vital that climate change education include an understanding of how children perceive climate change risk and the future of their planet. This is also central to inspiring action and more sustainable practices in the future.

The United Nations Children's Fund has estimated that 1.1 billion children are at "extremely high risk" to the effects of climate change (UNICEF, 2021). How children perceive this risk- both at a local and global level- is still largely unclear. Our insights from previous GCDs as well as existing research has shown a high level of concern amongst children and youth. This is demonstrated in the number of children participating in climate strikes globally and the number of cities in which these strikes are taking place. The number of children participating in these strikes increased from 2, 289 550 in March 2019 to 7, 322 477 in September 2019 (UNICEF, 2020). However, despite these insights, further research needs to be conducted on the ways in children percieve climate change and their relationship with nature. As can be see in the map below (Figure 3), children's level of concern was generally higher in Chile, India, Iran, Kenya, Mexico, Nigeria and Sri Lanka with 100% of children expressing concern that climate change would personally affect them in a major way.



Figure 3: Percentage of children with very high level of concern

Climate risk perceptions amongst children can also be understood through "distance from risk" i.e whether children feel that climate change will affect them personally. During the GCD, we asked children, "Do you think climate change and the destruction of ecosystems will affect you and your family?" with three possible answers - 1) yes, a lot; 2) yes, a bit, and 3) no. Unsurprisingly, the vast majority of children answered "yes, a lot" indicating a high level of perceived personal risk.





#### 4.1 What are the priority areas of intervention according to children

During the ideation phase of the Designathon, children were asked to identify the ecosystem that they would like to focus their intervention on. The ideation sheets used to guide children through a design-thinking process, created a space for us to engage with children around the ecosystems (or ecosystem component) they priortised for protection and restoration. When comparing the types of ecosystems prioritised by children in 8 countries across the world (Tanzania, Chile, Iran, India, DRC, Mexico, The Netherlands, and Ireland) we saw that the large majority of children prioritised the restoration of ocean and river ecosystems, with 40% and 26% of the innovations targeted at these ecosystems. Some innovations (8%) focused on the immediate environment around them by choosing urban ecoysystems as a key area of intervention.

#### Figure 5: Ecosystems in focus



By drawing on the sketch sheets, we could also gain insights on the specific threats to ecosystems that children would like to tackle in their countries. These threats to ecosystems varies considerably across countries. However, some common themes have emerged across countries. Interventions tackling litter for example, could be found in all the countries participating in the research with 20% of all participating children taking action around this issue. This was followed by deforestation, with 19% of children prioritising this issue. Tackling ocean pollution was also a popular choice for children with 15% of all participating children choosing to tackle this issue. Society's reliance on nonrenewable energy sources was another popular issue topic that children felt needed to be addressed. This was also illustrated in the number of children who chose solar and other renewable energy technologies to power their inventions.

# AFFORDABLE AND CLEAN ENERGY

Building wind turbines and solar panels which assists in the collection of the pollution in the rivers.

- Mario, Angel and Samuel from Mexico

The ecological issues that children prioritised were highly reflective of the ecological challenges faced by their countries. For example, a group of children in The Netherlands chose to tackle air pollution in a country that has the highest concentration of air pollution induced asthma in Europe. 1 in 5 Dutch children suffer from pollution induced asthma with this number increasing to 50% in bigger cities (Achakulwisut, 2019). UNICEF recognises air pollution as a high risk to 1 billion children globally, with decreases in air quality expected as a result of climate change (UNICEF, 2021). Children in the Netherlands were also particularly concerned about habitat loss. In 2020, researchers from Wageningen University warned that up to 70% of plant and 40% of bird species will disappear from the Netherlands and the country has lost approximately 50% of its wildlife in the last 30 years due largely to nitrogen pollution (WUR, 2020).

In addition, the country is experiencing significant habitat loss in heathlands, grasslands and agricultural habitats, while forest and dunes have shown improvements (PBL, 2008). In Mexico, ocean and river pollution were the most prioritized climate change issues according to our young changemakers in the country. Nearly 60% of riverine systems in Mexico are contaminated by agricultural pesticide run-off resulting in major health implications for some communities with pollutants including high levels of heavy metal, pharmaceutical compounds, and nitrogen from pesticides (Mora, 2021). In Sri Lanka, a country that has a good energy mix of biomass (approx. 30%, new renewables, and hydro), but with a continued reliance on coal and petroleum children recognised non-renewable energy reliance as a key ecological challenge (Sri Lanka Sustainable Energy Authority, 2019). In Vietnam, one group of children recognised food waste as a key climate change related priority in response to the US\$ 3.9 billion (2% of the country's GDP) worth of food loss in their country each year (Brun, 2018).

The Designathon Method gives children the space to link global sustainability challenges to their lived experience and local context. The ecological issues prioritized by children in this year's GCD, is indicative of the Designathon Method's problem-based approach to learning. However, while problem-based learning has been shown to improve learning outcomes, the strength of the Designathon Method is in the way it combines this learning approach with creative thinking and design. Creating innovative solutions to sustainability challenges and learning through doing, is at the center of the Designathon Method. When asked about their favourite part of the Designathon process, children in The Netherlands, Ireland, and Chile found the prototype building as most enjoyable, followed by the team work.



### 4.2 Radical hope: what children think we can do!

The Designathon method aims at creating awareness around the Sustainable Development Goals in a way that inspires hopes and action instead of fear. In our in-depth surveys with children in Ireland, Chile and The Netherlands, we asked children if they felt that the work they did throughout the designathon would help build a better future and the responses were largely positive (see figure 8). Several children from Ireland, linked their participation in the GCD to future job prospects and their personal skills development, while children in the Netherlands tended to link their participation to particular ecological challenges.



Figure 6: How worried are children about climate change?

Equally hope inspiring was the clarity with which chi dren communicated their needs and the support required to take their place as empowered changemakers. In Mexico, for example, children identified both skilled and semi-skilled labour such as construction work, electricians, engineers, and biologists as central to taking action. In The Netherlands, children primarily focused on the raw materials and equipment required to take action.
### 4.3 How children want to solve climate change and restore ecosystems

The majority of children (46%) chose to respond to ecosystem challenges with engineering solutions. This was followed by robotic solutions (20%) with many children choosing to address ocean pollution with ocean clean up robots such as the voice controlled robot using Arduino that collects garbage and oil from the ocean designed by children in Vietnam. Several children (10%) chose to develop awareness campaigns instead of tech designs, and others (4%) chose to develop rewards programmes to incentivise more sustainable behaviour in their communities. There were a limited amount of children (3%) in Nigeria and Tanzania who chose to respond to ecosystem challenges in their countries with nature based solutions.



Figure 7: Types of innovations





There was a strong correlation between the ecosystem challenge addressed and the type of innovation used to address it. For example, biodiversity loss tended to be addressed through architectural solutions, while ocean pollution was primarily responded to with robotic and engineering solutions. This was also true for deforestation with the inclusion of nature-based solutions and rewards programmes also used to address this ecosystem challenge. At COP 26 in Glasgow, 141 countries signed a landmark pledge to end deforestation by 2030. Through endorsements to the Glasgow Leaders' Declaration on Forests and Land-use", endorsers of the pledge have committed to protecting 90.94% of the world's forest from deforestation. Research participants from the USA, The Netherlands, Mexico, the DRC, India, Iran, Nigeria, Serbia and Tanzania focused their innovations on deforestation.

Country	No. of innovations with a focus on deforestation	Has country endorsed the Glasgow Leaders Declaration on Forestry?
USA	3	Yes
The Netherlands	3	Yes
Mexico	2	Yes
The DRC	1	Yes
India	2	No
Iran	1	No
Tanzania	3	Yes
Nigeria	1	Yes
Serbia	2	Yes





### We asked:

"Do you think the work you did today will help create a better future?"

### They said:

"Yes I do think that the work I did today will help build a better future because we're working together to save our planet and also each of us get to say our plan so we will get there! We will save the world!"

Rebecca Robyn (10), Ireland We asked: "What is an ecosystem?"

### They said:

"A ecosystem is where all living things coexist."

### We asked:

"Can you name one way that restoring ecosystems can help tackle climate change?"

### They said:

"Planting more trees will slow down the damage of fossil fuels."

Javier (12), Chile Leila De Jager (9) South Africa and The Netherlands



# PART 3: NEXT STEPS

## **CHAPTER 5: RECOMMENDATIONS & WAY FORWARD**

5.1 Key Recommendations

## **CHAPTER 6: WHAT WE NEED TO FURTHER SCALE**

- 6.1 Increasing our geographic reach
- 6.2 Investing in community engagement and storytelling
- 6.3 Updating our online tools
- 6.4 Investing in an evolving Designathon Method



#### PART 3: NEXT STEPS

## **CHAPTER 5: RECOMMENDATIONS & WAY FORWARD**

### 5.1 Key recommendations

The high level of concern around climate change and ecosystem degredation should be addressed at the school, community, city, national and international levels. We recommend that the following steps be taken to address these high levels of concern and to ensure children's health and wellbeing in the face of climate change and ecosystems degredation.

**1.** A better understanding of children's concerns needs to be developed: This report (and its previous iterations) provides a snapshot into the concerns children have around the Sustainable Development Goal topics. However, both localised and international studies need to be conducted that extend existing inquiries into children's concerns to younger children and the ways in which they experience sustainability issues. These studies need to include inquiries into the specific mental health impacts of climate change and ecosystems degredation and the short, medium and long term effects of these issu'es on children's wellbeing.

"Every citizen has the opportunity to sort and dispose of waste. They must be rewarded for that work. Super Automat should exist in several places in the city. Every city should have a lot of greenery that will purify the air" - Nina, Vukasin, Dimitrije & Djordje from Serbia

2. Climate and sustainability focused education needs to be problem-based and include design and creative thinking elements: To activate children as changemakers and inspire hope, istead of despair around climate change and ecological issues, education around these topics should provide children with the space to do something about these seemingly overwhelming issues. This action-oriented approach helps children translate their learning into changemaking activities.

**3. Classrooms should become a space for community listening:** The Designathon Method has illustrated the value of using problem-based and design-driven learning as a research tool to gain insights into the experiences, priorities, hopes and concerns of children. This has the potential to inform more child-centred decision making across various topics, but specifically around sustaianbility issues as children have every right to shape the decisions that will affect the ecological integrity of the world they are inheriting.

#### Recommendations on how to leverage children's radical hope for climate action

Targeting child-centred climate change action and education on specific ecosystems issues: Children demonstrated a keen interest in the restoration of ocean ecosystems. This can be leveraged by focusing child-centred environmetal intervention around oceans and marine life. It can also be leveraged for fostering a deeper relationship with oceans and their importance - where applicable. Issue topics that recieve less attention such as water scarcity, should be further invested in in the participating countries in this study. The most common ecological challenge identified by children was litter. Children should be involved in decisions around neighbourhood and ecosystem cleanups (beaches, forests etc) because of 1) their innovative ideas around how to do this more efficiently, creatively, and enjoyably, but also to further instill a sense of changemaking and action-orientedness in children.

"Call on professional athletes to partake in a competition in which they collect litter from the rivers, whoever collects the most wins. This is a campaign to build awareness" - Valentina García Hernández, Rodrigo Isaac Gómez Silva, and Andrés Pineda Dorazco from Mexico

Use robots and engineering to stimulate children's interest in environmental issues: Children participating in the study from countries all across the world, showed a keen interest in robotics and engineering solutions to climate change and ecosystem restoration. Combining these technologies with education on nature-based solutions can stimulate children's interest while linking their immediate realities and the resources available to them in order to take action of environmental issues.

AFFORDABLE AND CLEAN ENERGY

A LAMPOST TO SAVE THE WORLD:

A multifunctional lamppost powered with solar energy, plant hanger, a bird feeder and a soundproof bird house. Made using plastic waste from the bocean to save birds.

- Norah, Eden and Bettina from Malta

PART 3: NEXT STEPS

## CHAPTER 6: WHAT WE NEED TO SCALE

Designathon is committed to empowering 1 million children globally to take their place as young changemakers. In order to do so, we have identified several growth areas including increasing oureographic geographic reach and the depth of our engagement in certain countries, further investment in our community engagement strategy, further investment in our online platforms, and further investmentmin evolving our method to remain responsive to the needs of children around the world.

### 6.1 Increasing our geographic reach

While Designathon Works remains responsive and will continue to invest wherever interest in our work is shown, we have identified a list of "target countries" where we would like to deepen our impact and form more long term strategic partners. In 2022, we will focus our efforts on Tanzania, India, Finland, Tanzania, Democratic Republic of Congo, The Netherlands, and Nepal. In 2023, we hope to grow this in-depth engagement partners in Nigeria, Indonesia, The Balkans, and Turkey.

### 6.2 Investing in community engagement and storytelling

Designathon Works has made a significant impact on the skills and knowledge of children around their world as well as activating over 100 000 children as changemakers. In order to further demonstrate our impact to potential partners, collaborators and decision makers, we need to invest in rigorous impact measurement processes and tools. The Global Voices of the Next Generation research series has allowed us to do so and will continue to amplify the voices of children around the world.



### 6.3 Updating our online tools

The global nature of our work allows for the development of online resource tools that can support more child-centred learning environments wherever they are. Further investment in education material, learning tools, accessible thematic content within the Designathon Method framework as well as opportunities for collaboration and peer learning need to be further developed for us to ensure that educators are well equipped to empower young changemakers.

### 6.4 Investing in an evolving Designathon Method

Our commitment to inclusivity and equipping children with changemaking skills regardless of their gender, learning ability, household income, or learning environment requires constant investment in the continued responsiveness of the Designathon Method. This includes understanding the opportunities and limitations of applying the Designathon Method in overcrowded classrooms, under-resourced schools and with children with learning disabilities. We continue to do this work and welcome the support of partners to amplify this.

The Designathon method is a fixed process with a high level of adaptability to different contexts. Each stage is designed to empower children to take their place as changemakers. However, further investment needs to be made into learning and observing how the method has been applied throughout the world. This includes further inquiry into the resources and teaching aids required by teachers as well as the types of technologies that are most appropriate to deepening learning.

During a designathon children are guided through a 7-step experiential process, linked thematically to a bigger global challenge such as water scarcity, poverty, deforestation, or citizenship. Further details on this is outlined below.



### **DESIGNATHON WORKS IMPACT**

Since the official foundation of Designathon Works in 2014, the Designathon method has reached:

## 113.000+ children

# 2.000+

TEACHERS/FACILITATORS

have been trained and certified to give designathon workshops, worldwide.

## 45 COUNTRIES

have worked with us to achieve our mission

# 30.000+ inventions

Designathon method has led to over 30.000+ inventions around societal and environmental issues.

6.000+ global changemakers During the last five GCDs, more than three thousand children have contributed to making the world a better place.

# **OUR MISSION**

We envision a world where all children are engaged in applying their creativity to design a better world using new technologies.

# The Designathon method step-by-step explainer

### INSPIRE

A Designathon always centres on a specific problem, introduced in the theme presentation using images, videos and questions that will stimulate the children to think about the theme, make creative connections and start to wonder about if there are technologies that can help us solve the problem. Examples of such themes are; Mobility, Clean water, Sustainable cities and Life on Land.

### RESEARCH

The theme presentation takes the form of a dialogue and discussion with the children. This way, the children can explore the topic to get to know the topic's causes and consequences, in order to tackle them hands-on during the workshop.



### MAKE

The making phase is the children's absolute favourite part of the process, as this is when they can get their hands dirty. In this step, the children make a prototype of their idea, using repurposed materials, technologies and electronics from the Designathon maker kit (such as LED lights, solar panels, motors and switches). The prototypes show the inventions and campaigns in the most communicative way.

### SHOW

When the prototypes are finished, it is time to present them! The audience may consist of other children, teachers, parents and others.

#### SKETCH

During this step, the children make a sketch or functional drawing of their idea. Through adding symbols, words or other details, they learn to visually explain how their invention will work. This sketch is the blueprint for the prototype the children will make during the next step.



#### IDEATE

In groups, the children begin to ideate in groups of three using the Ideation Worksheet. With the Ideation Worksheet they explore the problem step by step, deciding which part of the problem to zoom in on and for whom they would like to invent something. At the end of this step, they have written out their idea.

### REFLECT

Usually, the teacher, facilitators and/ or an expert panel is present during a Designathon presentation to provide the children with feedback on the prototype's feasibility, scalability and originality. Through this, the children are encouraged to think further about their process, their design and are able to take away valuable lessons on the environment and problem-solving.

# PART 3: HOSTS

## **CHAPTER 7: GLOBAL HOSTS**

6.1 About the global hosts

## REFERENCES

References



## CHAPTER 7: GLOBAL HOSTS

### 7.1 About the global hosts

The Global Children's Designathon is a collective effort of designers, entrepreneurs, teachers and volunteers from all over the world. All of these amazing individuals grant their time, energy and heart in order to organize and host a GCD in the country they live and/or work in. In teams or alone, the 'global hosts' make sure the event is optimally organized, facilitated, executed and evaluated in each city. Meanwhile hosts connected with each other across borders to discuss, inspire and co-create. Under the overarching theme and Designathon Method the global hosts and their teams have made it possible to create a worldwide impact. Per city, the following pages showcase the back-stories of these amazing people and their drive to help children co-create a better planet.



## CANADA

Saida Benhayoune, Christopher Simeone & Hana MacDougall Montreal Centre for Learning Disabilitie



Hosted by Christopher Simeone and Hana MacDougall from the Montreal Centre for Learning Disabilities, and Saida Benahouyane, a parent of a child living with Autism. Christopher is a behaviour specialist with a focus on inclusive education and special needs, Hana is a clinical research coordinator with a focus on child health and human development, and Saida has a background in international development, design thinking and entrepreneurship. Varied backgrounds but a shared interest in making programming accessible for all future changemakers. They believe everyone is capable of achieving as long as they are given the tools they need! This year's GCD has been adapted to include children with learning difficulties, ADHD and/or mild autism. Held over one day, this reverse integration event is intended for children with special needs, but is open to children who are compassionate about supporting their friends, family or generally, contributing to more inclusive learning. With 1:1 facilitation and adapted educational materials, children had the chance to learn, share and build up creative thinking skills together - all within their capacity! This is held at the Montreal Greene Avenue Community Center, and was made possible with support from the Montreal Center for Learning Disabilities.



## CHILE

Paz SparkTalents, Belén Larenas Fuentes & Kirstin Engemann SparkTalents



In SparkTalents we dream of a world where all children can thrive, learn, develop their talents, and most of all, have fun, to become lifelong learners. At SparkTalents we awaken the curiosity and imagination of children and young people through innovative educational projects, empowering them to design a better world, which plays, explores and where learning can be fun. SparkTalents is a non-for-profit organization, founded in 2013 in Chile. We use science and technology (STEAM) and project based learning as tools to inspire young children and foster their skills. In order to reach more communities and children, we strongly focus on the preparation of teachers in the use of innovative technologies and methodologies with a focus on STEAM. The GCD is designed for 30 children from a vulnerable school. Our exclusive partner is the company Deloitte, who with their support allows us to finance materials, t-shirts, graphics, food, among others essentials. In addition, we have volunteers who are Deloitte workers, who supported and guideed the participating teams.



#### Timer out

Our group wants to help rethink our consumption since we use too much water without being aware of this situation. Our idea is to create a timer that indicates how long you can take a bath, for example, we put 5 minutes and when that time is over, the water is cut off. This invites you to start learning and have a real awareness of the time of use.



### Vending machine

Our group wants to help restore the ocean ecosystem, generating an idea that

encompasses recycling and reuse. We created a vending machine that receives used plastic to shred it and generate raw material to be able to make a new product. The user can choose their product and the machine will print it in 3D, reusing the plastic.



#### Book about the planet

Our group wants to help raise awareness about climate change and its consequences. We have created a book about the planet and what it is facing because of our actions. We want to share this book with children and young people from our school and community.



### Red McElroy FanPu X and SeedFun



FanPu, located in Chengdu, Chongzhou county advocates a natural and sustainable life style, and carries out a variety of cultural and tourism projects, such as parent-child recreation, outdoor exploration and research, science and education workshops. SeedFun Education was founded in 2017. It carries out innovative education from five dimensions: PBL, design thinking (DT), ESL, job experience, and drama/public speaking. Encouraging life-long growth through learning and practices. Our slogan is "Better Self, Better World". In 2022, FanPu and SeedFun will jointly hold this event. There were around 20 kids, aging from 7 to 12, attending this event. The event was on FanPu farm, an eco-friendly farm in Chengdu.



# Ocean trash collection system

We would like to set up a trash collection net along the coastline, build a wind generator to blow ocean trash into the net, and use motors to automatically roll up the net.



Shark trash collector

We designed a shark shaped trash collector. The mouth of the collector can suck in trashes, and there is a recycle machine in the bottom that can recycle wastes into useful materials. The shark shape is designed to frighten away the ocean animals.



### Trash collecting robot

This robot has an antenna and sensors to find the trashes and can automatically throw the trashes into its bag.

## DEMOCRATIC REPUBLIC OF THE CONGO

Rebecca Kabuya Mbayo, Jaime Thomas, Sarah Kalumba & Noella Coursaris Musunka Malaika



Special Projects Advisor & Teacher Rebecca, who has been with Malaika since 2013, has a degree in English and African Cultures from the Higher Educational Institute of Lubumbashi. Her love for education was inspired by her natural love for children, whom she wants to see happy and healthy, and by her parents. The GCD in Kalebuka is a totally new and exciting experience for us. The girls were so happy to design in order to bring solutions for our planet. They've had an opportunity to be in contact with kids of their age from around the world. They understand the word ecosystem, to recycle, to reimagine, waste, pollution, habitat, and what amazed me a lot is the fact that they understand they will not be healthy if they don't take care of Mother Earth. The conclusion: This group of students are pioneers in taking care of ecosystems in the Kalebuka community as well as in DRC. I am sure they will be proactive from now on.



A trap for baby fish

It has a captor, the red point near the black surface, releasing a sound and inside the trap there is adapted food. The sound and food attract small fish in the trap by an adapted entrance. Once there they can't go out so they are taken in a reserve zone and released there. The pink tail at the end is a camera that help control the reserve because no one is supposed to fish there until the fish is big enough.



**Robotic deforestation bird** 

This robot bird is made to fight deforestation. The two captors as eyes help detect forest fires, tree cut and any human presence in the forest. They will work thanks to rechargeable batteries found in a box inside the robot's belly. The solar panel on the tail provides power to the batteries. It is entirely covered with an aluminum foil to protect it from predators.



Awareness truck

This group made a truck for sensitization. The first part has a screen to teach and awake people mind concerning waste management and it consequences the second, the blue, one is a waste container for practice. It will pick waste in biodegradable bags classified according to waste type for example a bag for plastics another houses waste.... and drop them to the transformation company.

## FRANCE

### Laurence Bertea & Aliénor Turpin Eutopique



Eutopique is a non-profit organisation specialising in raising awareness of the SDGs through Design Thinking, working in schools and locations to form learning communities on highimpact societal issues. We make the educational community active and responsible in their learning. The GCD '22 took place at the Maison de la Conversation: place dedicated to the art of conversation, meeting and collective intelligence on transversal projects. 55 children from 2 classes were divided into teams of 4 to 5 people to co-construct their projects accompanied by a teacher, the Eutopique team and volunteers' facilitators and two teenagers who helped the children with the robotics kits. A graphic facilitator and a videographer brought the ideas to life throughout the day, which was rich in creativity and collaboration. At the end of the day, 4 experts (teachers specialized in environment, expert designers, activists or green innovators) reacted on the different prototypes designed by the teams. We also welcomed more than thirty parents who were curious to listen to the children's presentations and delighted to be made aware of these issues. Another success for this 3rd session of Designathon in France by Eutopique!



# The mechanical fish "bubble 2.0"

An intelligent mechanical fish that feeds on the waste it swallows and immediately transforms it into energy, equipped with a radar and ultra sound, it is able to detect the nets and prevent the fish by making them flee using ultra sound.



### The Fruity Station

It collect rotten fruits and vegetables, peelings with containers placed in supermarkets and transform this material into energy for a 100% organic fuel. Creation of dedicated service stations with tanks that recycle the raw material and the possibility of arriving with your waste and leaving with your fuel.



### The Monodeserix

To go and get the solar energy where it is: to install a huge network of solar panels on stilts in the desert (in order to allow the fauna to circulate freely), to store this energy and to distribute it in the neighbouring regions (why not by arranging greenhouses and developing a reasoned agriculture)

## GHANA

Elizabeth Ofosuah Johnson Dr. Monk & Chocolonely Foundation

### About the hosts:

Dr. Monk is an international agency that offers research and ideation, with a worldwide network of collaborating pioneers. We immerse ourselves in topics at the intersection of sustainability and global inequality, only to emerge with interventions that will have a systemic impact. Our goal is to contribute to a more equal, regenerative and compassionate future.

### About the event:

This year, we are hosting the Global Children's Designation in Ghana for the third time. Bringing children together from the Suhum area and the Agbogbloshie district, we are mixing children from both rural and urban environments. A unique opportunity for children from different backgrounds to work together and come up with refreshing and creative ideas.



#### Aponoapono Gardens

This project addresses the lack of green spaces in Suhum, specifically, Aponoapono where the children live and school. The project aims at creating small gardens for more green spaces. Communities can use the gardens as farms and to grow shade trees. Once everyone has the responsibility to care for plants, the more the gardens will flourish.



# The Environmental Protection Agency

This project tackles the problem that Accra faces having many environmental agencies that are not being effective. For the children, this is an agency that is more communal and exists in every community run by its people. The Agency collects all kinds of wastes from homes for recycling as well as ensures that green spaces and parkes as well as trees are well protected and preserved.



### **Green Farming Centres**

The farming centers are pro green farms that use as much natural resources as possible to grow and maintain organic produce. These farm centers are located near water bodies in the cities to provide more organic foods for people in the cities. By having these farm centers near water bodies, there would be the need to care for the water that feeds people.

## INDIA

Urvashi Sahni, Arunima Trivedi & Priya Kakkar Study Hall Educational Foundation (SHEF)



Study Hall Educational Foundation (SHEF) is an inclusive non-profit organization with decades of experience and a track record of transforming the lives of millions of children, particularly those of girls and young women. SHEF's interventions focus on community engagement and norm change, influencing government systems to be more equitable, and running a network of model schools and outreach programs in rural and urban India. Our uniqueness and merit lie in our egalitarian inclusiveness and our holistic, social justice-focused approach to directly address the patriarchal system in India.



## INDIA

Anant Bhaskar Garg & Dr. Manisha Agarwal HaritaDhara Research Development and Education Foundation (HRDEF)



The 3rd edition of the GCD by HRDEF is led by Anant Bhaskar Garg and Dr. Manisha Agarwal, HRDEF's Director. Both of the hosts previously worked in higher education, research and now developing models, hands-on, games for interactive, experiential learning for kids and youth. They are motivating future's generation as changemakers using technology, design thinking, STEAM, 21st Century skills integrating with sustainable development, SDGs issues. HRDEF is committed to climate action, environmental sustainability, disaster risk reduction awareness and capacity building within community. GCD 2022 provides opportunity for children to display their creativity for climate action, ecosystem restoration. It is held at the HRDEF's campus in the Dehradun.



### Water bottle plant

want or their other

My idea is to recycle waste plastic bottles, and use it for growing small plants such as herbs in those bottles. It is about reducing plastic waste, especially single use plastic, growing plants, and adding greenery to the urban ecosystem.





Myidea is to recycle waste plastic bottles, and use it for drop by drop water given to plants. They thought about water conservation and the agriculture ecosystem by allowing a small quantity of water to plants.



### Clean Water

We designed a low-cost water filter for urban and rural areas. They used two materials to clean water (wool and cotton) and were able to know which one filter better. Thus, quality water can be possible for the urban ecosystem.

## IRAN

Mohammad Badri, Marzieh Ghanimifard, Padideh Mohammadi & Nooshin Izadpanah Seywan Institute & Baloot School





The hosts of this event are Mohammad Badri from Seywan Institute and Padideh Mohammadi and Noushin Izadpanah from Baloot School. Mohammad with a background in software engineering, as director of Seywan Institute is active in the development and promotion of social innovation. Padideh with a background in software engineering and business management and Nooshin with a background in physics and management are the founders of Baloot School and are active in teaching children to be inquisitive, happy children of lifelong learning with a passion for taking care of their natural environment. All of us believe that it is our responsibility to provide opportunities for children to nurture and strengthen their talents so that they can become future leaders and changemakers and contribute to the design and creation of a more sustainable, resilent and humane world. This was our first experience holding a GCD. While we were planning to hold the event in schools and in two cities at the same time, this was not possible due to the Covid-19 situation and the end of the year in Iran. Finally, we held the one-day event, in the IranceII Academy at the Sharif Innovation Station in Tehran; sponsored by Rahyab Melal, a civil engineering company.



### Forest Humidity Regulator

In this project, we have the idea to design a system to absorb excess moisture during the rainy season so that this system can provide the required moisture in the forest during the drought season and prevent fires.



#### **Compost Castle**

Our idea is to create a beautiful castle to recycle wet waste and make compost. This castle, which is made of recycled materials, is so beautiful and attractive that all the people of the city are eager to take their waste there to produce compost.



### Farm Wind Turbines

Why should we bring electricity from the city for the needs of a farm? We can use wind energy on the farm to generate electricity and meet all the needs of the farm. The idea for the kids is to build a wind turbine for the farm and build a sustainable system to power the farms.

## IRELAND

### Tricia Beecher & Birgit O'Driscoll Green-Schools Ireland through An Taisce's Environmental Education Unit



Tricia and Birgit work for the Environmental Education Unit of An Taisce - the National Trust for Ireland. They have been working with primary schools around Ireland engaging them in Global Citizenship Education for the past 12 years. Empowering children to create the change needed for a just and sustainable world by engaging them with the SDG's. The Green-Schools programme is an international acredited, long term programme, for environmental and sustainability education (internationally known as Eco-Schools) which engages over 59000 schools globally. We delivered the initial designathon workshops to the participating schools through zoom and got the children to ideate and sketch their ideas. Additional class time was then provided by the class teachers to develop their ideas further. We then went back to the schools both through zoom and in person, to help the children to make their prototype. The children were then encourage to present their inventions to us and we asked them to vote on the two best prototypes to go forward to the GCD day which was held in Cork County Council offices. The children from 5 participating schools joined on the day and presented their prototypes to a panel of experts include the Lady Mayor of the county. Their class mates joined them through a zoom link on the day!



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## **IVORY COAST**

Mariame Yayatoure Chocolonely Foundation



Mariame Yayatoure is a cocoa expert, a children's- activist & facilitator and trainer. Mariame: I have lived and worked in cocoa communities for about 20 years. The situation of the producers remains the least enviable in the cocoa value chain. It's not fair to the children in the cocoa communities, whom unfortunately are born in severly deprived places. This was the fourth edition of the GCD in Ivory Coast. I am proud of it because the particularity of Ivory Coast is that we give the most vulnerable children in rural areas the opportunity to reflect and propose solutions and make their voices count for their future.



Ocean cleanup ship

A ship that aspirates and recycles wastes from lagoons and seas.



Solar powered bushfire detector

It is a solar system equipped with cameras and underground water pumps and posted in a forest. As soon as a flame starts, it is detected. The system alerts a nearby fire brigade and the underground water pumps trigger automatically before the intervention of firemen.



A renewable energy reservoir for the village : Recyclable electricity waste

A tank in a village with 2 compartments. The villagers throw human and household waste there and when it is full, it closes automatically and burns the waste so that the heat generated by this combustion is transformed into electrical energy which transforms the waste into coal for cooking on the one hand and into agricultural compost on the other hand.

## **KENYA**

Prof. Gideon Bin Klei & Michelle Tjeenk Willink Gatoto School & Nameta Trust



Gideon has hosted GCD in Nairobi since 2016 and has a vast knowledge on working with young people in the informal communities. As a teacher and social changemaker, Gideon has nurtured talents and mentored students through education over the years and now embracing arts and education for social change in Africa. It's with this passion that he founded Nameta Trust. A non profit organisation on a mission to provide more art opportunities to youth in the informal communities. This includes creativity, and especially having youth from marginalised communities stand up and speak about the change they want to see in their communities. Gideon, was hostingthe GCD '22 with support from Michelle Tjeenk Willink, Educational Consultant of Designathon Works and crew from Thinking Differently organisation. GCD '22 was done in two phases i.e the classroom challenge and finals. Partnership with Designathon Works has made children in Mukuru (one of the biggest urban slum in Kenya) come together and prototype ideas that suggest possible solutions to world problems aligned with SDGs.



### Water purifier

We came up with this idea so as to use the project to change dirty water to a more useful one by tapping this water from a polluted river/lake.



### Recycling machine

A machine to recycle garbage and use the final materials to make more useful products.



# Environment conservation centre

We came up with this idea to use the centre to train people on forest conservation, initiate projects to encourage reafforestation (Probably setting up seed bed/Nursery and use the centre as a contact point for flagship programs.

## MALTA

### Lexi Samut-Tagliaferro & Steve Cassar FoundunFound Ltd.



Lexi began her career in Visual Design in 2007 joining creatives in Malta and the UK applying skills in Graphic Design and User Experience Design. Inspired and intrigued by 'affective design' and 'designing memorable and impactful, usable experiences' Lexi continues to be involved in projects which follow a 'human-centred-planet-centred design-for-good' ethos whilst continuously developing her toolkit for peer-to-peer collaboration along the design thinking 'idea-make-test' mindset. Her most recent initiative called MANIFEST is a culmination of this cross-disciplinary work. Steve's background in design and brand development working with companies and multinationals both locally and in different parts of Europe, Africa and the Middle East, designing experiences and building brands has been a significant part of Steve's life for over 30 years. Steve set up FoundunFound focusing on service design, business transformation, brand experience and design strategy, working more with companies and organisations that want to take a more holistic and human centred approach to problem solving - 'designing with purpose' to create more meaning and lasting impact. At this first GCD in Malta we had four groups of children who produced four prototypes that cover different environmental aspects, mainly cleaner ways in which we can generate electricity, waste separation, water conservation, and plastic pollution in our oceans. The success of GCD is that 8-12 year old kids in Malta had the opportunity to present their ideas about their future as 3D prototypes without constraint and having fun whilst doing so. With this skillset and vision the younger generation of changemakers can continue to make an impact and bring about the changes necessary to reach the Sustainable Development Goals. Above all the GDC teaches and empowers children to tackle 21st Century complexities.



### Eco lamp post

A multifunctional lamp post powered with solar energy, plant hanger, a bird feeder and a soundproof bird house. Made using plastic waste from the ocean to save birds.



### Treadmill Power

Conscious plate (tabaklator) A treadmill that makes people fit whilst generating electricity. The treadmill is connected to a main battery, converting energy and supplying electricity to other household appliances. This system reduces the consumption of fuel and emissions into the atmosphere by using an alternative power supply.



### **Turtle Saver Box**

A garbage bin dedicated to 'Save the Turtles', with sign posts to 'save the environment' and a model of a turtle made out of styrofoam at the top. The bin will consist of separators for different types of disposal waste which are known to harm turtles e.g bottle caps, plastic, general waste... as well as a light sensor to indicate when full.

## MEXICO

### Alejandra Peña Pous & Monica Varela Cuevas Social Design.ed



Alejandra has more than 20 years of experience on social and sustainable development through educational NGO's. Leader of complex projects, influencing others to achieve results and driving change through thoughtful analysis and creative problem-solving. Skilled at building coalitions of support across sectors in challenging situations. She is an activist for children human rights and is Key Network Partner of Designathon Works in Mexico. Social design Ed is the Key Network Partner in Mexico and we look to integrate children from diverse backgrounds in our country. This is the first year Mexico participants at the GCD with 99 children from 3 states and diverse backgrounds: Camelot School in Guadalajara City, Citac AC, NGO based in a rural community in Tapalpa, Jalisco, Astro Base school in Chiapas.



### Awareness campaign

Call on professional athletes to partake in a competition in which they collect litter from the rivers, whoever collects the most wins. This is a campaign to build awareness.



### Submarine litter collector

A Submarine litter collector shaped as an sea animal, which does not create fear in the sea animals.



#### The sprinkler pipe

The sprinkler pipe reuses water from households to provide water to gardens.

## NEPAL

Pavitra Bahadur Gautam, Sagun Khadka & Sachet Manandhar Karkhana Samuha



Karkhana Samuha is a Nepal focused non-profit organization that empowers people with the skills and attitude to help build their own future and the future of the community. Karkhana Samuha works towards nurturing a spirit of innovating locally to make a global impact. Karkhana Samuha uses design thinking and results-based management approaches to work under five broad areas (SLIDE) – Sustainability and Climate Action, Lifelong Learning, Innovative and Inclusive Education, Digital Transformation, and Education in Emergencies. GCD '22 hosted 51 students from 17 private and public schools. The participants learned about the design thinking cycle, brainstorming techniques, prototyping and iteration process. The students, then built their prototypes to come up with solutions around the theme 'Our planet, Our future!'.



## NIGERIA

### Rebecca Olu, Semiye Michael & Ngozi Edum Dean Initiative



DEAN Initiative represents and implements World's Largest Lesson initiatives in Nigeria and selected African countries. Our major ambition is to provide students across Nigeria with sustainable development goals learning opportunities and invite them to become part of the solutions to some of the world's biggest challenges. This year through a partnership with Designations Works, we participated in the GCD '22 with the theme: Our Planet, Our Future!. We hosted pupils from 3 schools within the FCT namely: Junior Secondary School, Gosa; New Beacon International School, Apo; and Kidsville Higher Academy, Gwagwalada. Our team worked closely with volunteers during the preparatory sessions and the Learning & Exchange Week to get the pupils ready for the finals. In its entirety the GCD workshop and finals intensified pupils' knowledge on climate change and its impacts, think and come up with ideas to restore the ecosystems. Education is an essential tool/element in the fight against climate change. Hence, acquiring knowledge regarding environmental matters and climate change and its impacts during the designation has helped the pupils to understand and tackle the consequences of global warming, encourage them to change their behaviour and adapt to what is already a global emergency as well as raise their awareness regarding the causes and consequences of climate change and also stimulate them to think of and proffer solutions.



### Awareness campaign

Our idea us to publicly enlighten people in our communities on the dangers of plastic pollution by creating awareness because plastic pollution can destroy a nation.





# Resoring the forest ecosystem

Our idea is to restore the forest ecosystem by planting more trees, educate people in our community on effects of bush burning and deforestation. Recycling

Plastic pollution has been a major concern in our environment, so we want to reduce the plastic waste by recycling the plastic into flower vase etc.

## SERBIA

### Tijana Jovanović Petrović KidHUB, Designathon Works Serbia



Tijana Jovanović Petrović is a social entrepreneur, designer and educator. She launched the first socially responsible toys in Serbia called Koba Yagi Toys, and is the director of KidHUB which is dedicated to empowering the creative potential of children and employability of young people through innovative educational programs, social innovations and creative entrepreneurship. This year, GCD had 4th edition in Belgrade, Serbia. We had one day teacher online training for 35 teachers from 20 primary schools in Serbia, 400 children age 8 to 14 participated in the challenge "Our Planet, Our Future!". In the finals, we had 10 teams from 10 schools from Serbia and three winners.



Eco bus garden

This bus station has solar panels that convert solar energy into electricity that is used to power LED lamps that light up in the evening and illuminate the station. Within the station, there is a "plant carpet" that feeds and maintains planted plants using a humidity meter that controls the micro bit, an ecological video game that actually collects donations from citizens for the purpose of landscaping the city.



Machine for suppressing acid rain

An eco machine that uses a filter in the form of biodegradable rockets. rain. The prototype was conceived with integration with micro: bit and simple electronics.



Super automat

A super machine for sorting textile waste and its recycling, but also air purification. The vending machine directly engages the local community and encourages it to take care of green areas so that the exchange process functions as a game because for different quantities of textiles, planting material is given as a reward to the bearer.

## **SRI LANKA**

### Sampath Senawatte Good Deeds Day Sri Lanka



Sampath is academically and professionally qualified engineer for civil & computer engineering, and a qualified educator for ICT & English. He is a founder of Kekirawa Learning Centre, Ruwanwella Learning Centre & Good Deeds Day Sri Lanka. He is working with vulnerable rural communities, focussing to building an empowered and inspired sustainable community with knowledge, skills, and values, and a positive attitude towards life. GCD Sri Lanka & Kekirawa Learning Center participating in GCD '22 for the first time. Initial introductions & training sessions was conducted for nearly one and half months and was worked towards the finals with students resided in four different locations on the Island. Children were very eager to work on the theme, they had lots of discussions, arguments and presentations. Unfortunately due to the current crisis in Sri Lanka, we couldn't participate in the GCD finals.



# Greenhouse gas detecting drone

Design of an Arduino coding to be attached to a drone which can sense the polution and report back to the control center. Additionally it send updates and the readings of green house gasses such as carbon dioxide, methane, nitrous oxide. The app is connected to the Google map via GPS.

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### Tablet

We would like to produce a tablet that uses nano technology to run a vehicle, in order to reduce mixing carbon monocxied in to the environment.

#### **Biogas generator**

We would like to build up a volunteering team to collect garbage from a particular area and then generate bio-gas by using the waste. This gas will be used to run a turbine fixed in the area and generate electricity to distribute among villagers.



Mona Wärdell Tvätteriet



The GCD 2022 in Sundsvall was led by Mona Wärdell, of Mid Sweden University with support from Design i Västernorrland. Mona has a Bachelor's degree in Industrial design and has previously worked as an Interior Designer and Project manager in New York City. Mona is also the manager of a Maker Space called Tvätteriet where she welcomes children and adults who are curious to learn more about the design process, technology and creativity.



## TANZANIA

### Lupyana Mbembati & Cynthia Kolimba The Jenga Hub



The Jenga Hub is a vibrant and diverse community of children and youth that reimagine education using technology, through a process of creating memorable learning experiences that improve learning outcomes and make learning more engaging and inventive. GCD '22 entails a handson experience of Designathon method within a classroom setting under the set theme, using everyday materials and maker kits, to ensure an immersive experience that can be adapted in our children's various contexts.









## THE NETHERLANDS

Sonja Garenfeld & Ina Conkic Designathon Works



This year's hosts are Sonja Garenfeld, and Designathon Works' co-founder Ina Conkic. Sonja and Ina both highly value education and want to make a positive impact on the future generation's capacity to be changemakers for a better world. During the GCD '22, 1.200 from the Netharlands participated, leading up to the finals in Amsterdam. Diverse in terms of their cultures, socio-economic background, age and gender, the children formed a united group. The Amsterdam event was held in the OBA, Amsterdam city library.



**Buchwheat Seeder** 

We designed a buckwheat seed planter to help biodiversity. This vehicle is a solar powered and travel automatically around the city of Hilversum planting and watering buckwheat seeds. We discovered that buckwheat plants are particularly good at attracting insects and thus promoting biodiversity.



### Eco district in living trees

The best tree to live in is the oak, because it grows very thick and large. We built a prototype of their own econeighbourhood. We don't want to cut down or burn trees, but rather live in them. By adding solar energy and water recycling they aim to be self-sufficient.



### **Green School**

The Green School is a model for how a school building can be adapted to give space for the local biodiversity to flourish. Birds, bees, hedgehogs and bats are all welcome with food and places to live and have nests. The team also made a plan to share with other children as to how they can make their own school become a green school too.
## VIETNAM

#### Ms. Dau Thuy Ha & Mr. Nguyen Sy Hieu Ban Mai K-12 School System



The first GCD in Vietnam was started by Ms. Dau Thuy Ha and Mr. Nguyen Sy Hieu at Ban Mai Secondary & High School in 2018. In the past 4 years, the event was expanded to more schools in Hanoi and received strong support from both the schools and the community. Ms. Ha is an active entrepreneur on the field of technology and education, who has founded KidsOnline, a leading company that provides school management app for schools and language centers in Vietnam. Mr. Hieu is an educator, who actively lead and advise on the development and management of International programs in both K-12 schools and higher-education institutes in Vietnam. This year is the fourth year that GCD is organized at Ban Mai Secondary and High School. During the GCD, the children had an online excande with their peers in Sichuan, China. The exchange session was fruitful as students from both sides were able to share their ideas and products with one another. Due to COVID-19 the size of the event was smaller compared to previous years, however, the event was successful as students had the opportunities to share their ideas, create products and present them to our judges and their friends.



## A voice-controlled robot using Arduino

The robot collects garbage and oil from the ocean. We can give specific voice commands to the robot through an Android app installed on the phone. Outside the robot will use a gear motor with wheels for the robot to move.



# Garbage and oil collecting vehicle

This special operation is completely solar powered with a battery system mounted on the roof of the boat, energy will be stored in the power supply to operate the engine and crusher.



Save food, save life" project

Leftovers or dirty food will be put into the automatic blender unit. It will mix food waste or dirty food into smaller pieces, which will then be turned into fertilizer. As for leftovers or inedible food, customers will put it on the right and then drop it into the automatic canning system below. Thanks to that, after the meal, the table will become immediately clean and the next customer can sit.

## THANK YOU!

For reading, sharing or contributing to this report and this research. This research owes everything to the children whom participated, the hosts, the researchers, volunteers, facilitators, experts, sponsors, partners and of course team Designathon Works.

But, also a giant thank you to everyone that has helped spread our message, by coming to the launch event, telling others about this report, reading it and passing it on. The purpose of this report is the amplification of the Global Voices of the Next Generation and by handling this report you are an active contributor to this goal.

Let's build a better future together! Designathon Works

Emer Beamer Founder Ina Conkic **Co-Founder**  Anne Sallaerts Co-Founder



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The increased complexity of global development challenges such as climate change, require new skills and ways of knowing. This includes 21st century skills such as global citizenship, creative thinking, and problem-based learning.

The climate crisis is an issue with many dimensions. It is intrinsically interlinked with other global development challenges around poverty, education, gender equality, food security, and health. As a result, children around the world experience climate change in very different and nuanced ways. Their proximity to climate risks such as droughts and flood events, their household incomes, level of education and access to nutritious food, their ability to access quality health-care and other basic services, as well as their socio-cultural and economic relationship with nature, all affect the ways in which they experience climate change.

Since 2014, Designathon Works has hosted an annual Global Children's Designathon (GCD) dedicated to celebrating what the world could be like when children are put in charge of designing better futures for people and the planet using new technologies. The theme of the GCD 2022, "Our Planet, Our Future!" provided children with a creative space to learn about the main cause of the climate change crisis and how it affects the planet. Children were encouraged to think critically about the relationship between humans, the land and other living things and to find solutions to the climate crises through ecosystem restoration. Drawing on insights from our GCD 2022, this report is a collection of children's voices from around the world. It provides insights into the hopes and fears of children as well as their ideas on how to build a more just, equitable and sustainable future. The aim of the report is to provide decision makers at the community, city, national and international level with insights into children's experience of the world, the issues they prioritise and the support they need to emerge as a generation of changemakers committed to building a better future.

