Child Centred Climate Change Adaptation (4CA)

Act to Adapt

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Climate change is one of the most important development issue for this generation, and future generations, of children living in Asia and the Pacific.

Climate change represents a real and urgent threat to vulnerable children and their communities. The Earth's atmosphere is warming, largely as a result of increased greenhouse gas emissions, creating uncertainty in weather patterns and increasing the likelihood of climate-related disasters and crises. These include rising temperatures and sea levels, changing rainfall patterns, more frequent extreme weather events such as severe floods or extended droughts and increasing intensity of storms.

The impact of climate change is already affecting communities across the world, especially in Asia and the Pacific. According to the latest Climate Change Vulnerability Index, countries in South and Southeast Asia make up one-third of all "extreme" risk nations worldwide.[1] The region accounted for 65% of the world's deaths caused by natural disasters and affected more than 200 million people on average in the last decade.[2] Extreme weather events displaced more than 42 million people in the Asia-Pacific region during 2010 and 2011.[3]

With global temperatures having increased an average of 0.8 degrees Celsius since the pre-industrial age, average summer warming in the South East Asian region is projected to be 1.5°C by the 2040s and could increase to around 4.5°C by 2100. Rise in sea-levels, loss of coral reefs and devastation to coastal areas are likely results in South East Asia, while water scarcity in some areas and flooding in others are the projected impact of climate change in South Asia. Together these changes threaten to leave hundreds of millions of people without water, food or access to reliable energy and exposed to increasing intensity of storms.

The ability of communities and nations to adapt to change is crucial as the frequency, intensity and gravity of climate change-related events escalate. Children in Asia and the Pacific will be at the forefront of these changes. We must empower children and young people to lead and participate in their communities' efforts to adapt to an increasingly fast-changing world.

Visible change: Documenting local climate change impacts

Igen (at the centre) documenting the impact of climate change

The impact of climate change is all too apparent to Igen and his community in Lembata. Together with two other children, Igen is a Peer Counsellor in a village in Lembata, Indonesia. As a member of the community's climate change monitoring group, he participated in a study trip to learn about climate change adaptation and gain practical skills, like how to make organic fertiliser or provide first aid after a disaster. Igen is using his photography training to document the impacts of climate change.

"Now from the field we can only harvest one or two sacks of corn. Many crop fields are failing. Farmers are not sure when they have to plant. From the elders we learned, corn harvesting used to be in March, but now in May it was still raining." Igen also remembers his parents used to recognise signs from nature before the rainy season or when they have to start planting, "but now no more, and farmers can no longer find a benchmark."

Harvest seasons are increasingly unpredictable and the sea level appears to be rising around their villages. "On the beach, there is one coconut tree that used to grow, but over a few years it is already far out to sea and now it's dead", remarks Igen.

Why focus on children?

The Asia-Pacific Region has 750 million young people aged 15-24 years, and more than one fourth of the region's population is under 14 years old.[5] Climate-related disasters often have disproportionate impacts on children, with serious implications for securing their human rights, including their health, survival and education. Impacts ranging from malnutrition as seasonal changes affect food security, higher mortality rates from extreme weather events, susceptibility to climate induced diseases, and disruption of their education. For example, as rising temperatures result in the spread of malaria into previously unaffected areas, it is the lives of children that are most endangered.[6]

While just children are often more vulnerable to the impact of climate change than adults, they are also more than passive victims. Children are often excluded from the decision making even though they have a right to participate in decisions that affect them. It is essential that girls and boys actively participate and learn to contribute to the planning around climate change to build their adaptive capacity for the future.

Many will argue that our focus should be on protecting children from the challenges of climate change rather than involving them in dealing with a problem that they did not create. But being able to take action through playing a meaningful role in the face of adversity can offer a kind of psychological protection, helping children to feel more in control, more hopeful and

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[1] Maplecroft Climate Change Vulnerability Index 2014

[2] UNESCAP Statistical Yearbook for Asia and the Pacific 2011

[3] ADB 2012. Addressing climate change and migration in Asia and the Pacific

[4] World Bank. 2013. Turn Down the Heat: Climate Extremes, Regional Impacts, and the Casefor Resilience; http://www.worldbank.org/en/news/feature/2013/06/19/what-climate-change-means-africa-asia-coastal-poor

[5] UNESCAP, Social Development in Asia and the Pacific, 2013 http://www.unescapsdd.org/youth

[6] UNICEF 2014: The Challenge of Climate Change: Children on the Frontline

more resilient.[7] Moreover, supporting children today to explore these issues, builds a culture of safety and empowers them to be agents of sustainable development.

In the next two to three decades, it will be these children and their own families who will be affected by the decisions made today. By enabling children to become leaders on climate change issues, they will be ready to face these challenges now and in the future.

Winning Hearts and Minds For Climate Risk Reduction

Young people chart out the climate risk in their community

The members of Purakata Child Organisation in a far-flung village in Bangladesh have good grasp of climate change, particularly how it relates to their community. More importantly, they have clearly taken a keen interest in their role in raising awareness about these issues.

The beginning was hard though. Shimu, President of Purakata Child Organization and a grade 10 student, recounts how she and other members were jeered at when they visited houses to deliver disaster risk reduction messages. “Here come the kids. They now want to teach us what we should do and do not do”, some would say. “Allah gives disasters. What can we humans do about it?”, others would state. Some would simply drive them away from their houses.

Nevertheless, they carried on. “We would tell them that if they had raised the floor of their house they could have protected their houses from being inundated during the Mahasen, a tropical storm that hit Barguna in 2013,” says Shimu.

They gave practical advice like covering up the water well with plastic so floodwater doesn’t get into it and boiling water or using the alum mineral locally known as “fitkiri” to purify drinking water in the immediate aftermath of flooding to avoid diseases. These sound very simple but in these far-away villages of Bangladesh such tips can be life-saving.

Today, people seem to be more willing to listen to these child activists. During their awareness campaign, Shimu and her fellow group members made house to house visits and held courtyard meetings. “We try to explain to them climate change issues in a simple way. We encourage them to plant trees in their backyard, saying the economic benefit of it as well as the fact that they would protect their houses during storms. We also tell them to use organic fertiliser, which is cheaper and keep their crop fields healthier,” explains Shimu.

The activism of the children has started winning hearts and minds of the local-level decision makers who believe the children’s voice need to be heard. Azizul Haque Shawpan, Chairman, Dhalua Union Parishad, is quite impressed: “We have children’s representative in the Union Disaster Management Committee. And their work in the form of risk assessment and action plan has helped inform the Union’s development plan.”

[7] Hart, R., Fisher, S. & Kimiagar, B. (2014), ‘Beyond projects: Involving children in community governance as a fundamental strategy for facing climate change’. In, The Challenges of Climate Change: Children on the front line. UNICEF Office of Research, pp.92-98.

Climate change adaptation programming *for* and *with* children

Children's rights are at the centre of Plan's climate change work. This includes work for children, in delivering child-sensitive adaptation projects, and adaptation with children, which ensures children's active participation in the design and implementation of adaptation projects.

Plan's Child Centred Climate Change Adaptation (4CA) program aims to build the awareness of children and their communities about climate change and to empower them to be active participants in adaptation efforts. This involves the translation of relatively new and complex climate science concepts into real life practice using the tools, techniques and knowledge of local communities.

It is an innovative approach to climate change adaptation that fosters the agency of children and young people. We support children and their communities to explore how and why things are changing, the impact this might have on children's rights, and gets adults talking to and learning from children on finding the best roles for children to play in community resilience. Each community and school designs and implements adaptation projects using small-scale funding. The process strengthens their ability to prepare for climatic impacts and engage better with local government.

The overall goal is to achieve safe and resilient communities in which children and young people contribute to managing and reducing the risks associated with climate change. Together with our partners, Plan is implementing our 4CA approach in 14 countries across Asia-Pacific: Bangladesh, Indonesia, Laos, Myanmar, Nepal, the Philippines, Thailand and Vietnam in Asia; and Fiji, Kiribati, Papua New Guinea, Solomon Islands, Tonga and Tuvalu in the Pacific. The project is supported by the Australian Government as well as COFRA and OAK Foundation with additional public donations from Spain.

How children and communities are participating in climate action across the Asia-Pacific region

The 4CA approach has three key components:

1. Awareness and education on climate change to build children's adaptive capacity;
2. Action through the participatory planning and implementation of community and/or school adaptation projects; and
3. Advocacy with government stakeholders to take into account children's voices and their rights in climate change action.

This is a snapshot of those activities and how 4CA is taking shape across Asia and the Pacific, directly engaging over 100,000 children and reaching over 750,000 people.

1 **Awareness and Education:** Children, young people and teachers learn about climate change in a fun and interactive way and become peer educators in their communities and schools on how to manage the risk of a changing climate.

- The project succeeded in helping beneficiaries recognize climate change impacts and disaster risks as threats to children's well-being and in building capacity to address vulnerabilities. Current knowledge, attitude and practices of children, community members, teachers and government stakeholders on climate change were surveyed at the start of the project, showing an increase in knowledge and concern for the issue over the project period.

- A great success has been the development of child friendly and locally appropriate education materials on climate change such as teacher manuals and children's books, posters, cartoons and animation films, as well as games. These materials have been widely adopted by governments and other organisations. For example, in Vietnam and Thailand, the teacher manual was officially approved by the Ministry of Education and over 1,380 teachers were trained on climate change education using interactive teaching methods. In Thailand the teacher manual was even reproduced by the Ministry and disseminated to all Education Service Area Offices nationwide.

- A regional research study also explored the needs and opportunities to integrate climate change and environmental education into youth vocational training to provide the next generation with green skills for the future.

- Plan also uses a peer-to-peer learning approach to build children's knowledge about climate change, empowering children to build awareness among their peers and communities. For example, in Thailand, young people from northern ethnic minority groups were trained on how to use shadow puppet shows to build community awareness on disaster risk reduction (DRR) and climate change adaptation (CCA) in a fun and engaging way. In Quang Tri province in Vietnam, the Climate Change Communicators, a group of trained children, lead and train other children on climate change adaptation and mitigation through games, films and other communication activities.

- All countries have conducted trainings for community members and leaders, youth leaders and children on disaster risk reduction in a changing climate. A toolkit for community facilitators on climate change assessments was also developed in Indonesia and Thailand to motivate participants, especially children, to take a lead role in mobilizing community action on climate change.

- In Indonesia, children were trained in writing and photography skills to encourage them to analyse and explore changes in their community related to climate change. Local knowledge that could be used for adaptation was identified, mapped and recorded to preserve for future generations.

A special message through a special performance

In its effort to involve all members of the community, the 4CA project in Kiribati engaged with the disability group Tetoamatoa to deliver climate change and disaster risk reduction awareness messages through a drama show. The show has given the group an opportunity to demonstrate their talents and capabilities, while providing a platform to raise awareness on the risk factors for people living with disabilities and to strengthen the community's capacities in coping with climate change. The group has been engaged by Foundation for People of South Pacific in 10 different communities in South Tarawa. Due to their unique challenges, the performance is more interesting to the communities and attracts larger audiences compared to other normal drama groups.

"Before, they [people in the commune] didn't pay attention to climate change. When there was drought or a flood they just thought it was nature, no one cared about prevention. With the project we now recognize why weather is changing, that it's getting hotter and floods are more frequent. People really recognize climate change and how it influences their living. Now, they want to stop cropping near the river because of flood risk."

– Representative from Thanh Commune and local project management board, Dakrong District, Vietnam

Teachers and students in Northern Thailand create their own big picture books on climate change and DRR in ethnic languages to be used as teaching tool for children in their schools.

Innovative Teaching for Climate Change Education in Ethnic Communities in Northern Thailand

With the support of the Education Service Area Office (ESAO) and Plan Thailand 4CA project, the teacher network in Chiang Rai Province has developed various kinds of climate change adaptation and disaster risk reduction learning materials for children belonging to ethnic groups such as Aka, Lahu, Karen, and Tai to increase the understanding of children and their communities.

Since there are more than six ethnic groups using different dialects in the target areas, language barriers are one of the main challenges for the effective participation of children and the community. The way to overcome this is to develop learning materials with various languages and to use different visual learning methods suitable for children. For example, providing training on how to perform traditional shadow puppet shows in a new fun and colourful way on the topic of disaster risk reduction and climate change adaptation.

The bilingual learning materials are one of the main tools that will create an enabling environment allowing children and youth to play active roles in their communities. Often the children speak the Thai language better than adults in the community and can share their knowledge on climate change and disaster risk reduction through creative stories and performances with the community.

The idea for the bilingual "big picture books" came from a teacher at one school under the 4CA project in Chiang Rai. Plan supported a workshop with the district education office and teachers from a number of schools on how to make these big books and other education materials on climate change. A series of books were produced for their schools in their district. The Education Service Area Office has now integrated disaster risk reduction and climate change adaptation education in its work plan for next year and plans to roll out the education program to all 52 schools under its supervision. The teachers also organised a training session on how to make the books at the Asia Ministerial Conference for DRR Ignite Stage in Bangkok in June 2014, attracting much attention from delegates.

2 **Action:** Children and their communities explore how climate change will affect their lives and to build capacity and resilience within and across their communities.

- Through a participatory process, Plan works with communities and children to analyse how climate related disasters and other changes could impact their communities and encourages them to identify appropriate solutions. For example, in Laos, some communities identified activities that would ensure better nutrition for children by creating alternative livelihoods and improving environmental protection.

- Priority activities are implemented by communities and children themselves with support from Plan and other engaged stakeholders. Some of these activities take place in schools and children's communities learn how to design, implement and monitor small scale adaptation projects.

- Most projects aim to counter the increasing risk of local disasters and environmental degradation. The range of adaptation activities supported included tree planting and reforestation, home/school gardening, mangrove plantation, erosion protection, constructing small check-dams, rain water harvesting, and income-generation activity with poultry farming. Activities by children's groups also included campaigns for protection of local wildlife and ancient forests, producing radio programs on disaster protection, and creating climate change adaptation learning centres in schools.

- In Vietnam for example, a nation-wide competition called on children and youth groups to develop child-centred climate change adaptation projects. Over a 180 proposals were submitted and more than 70 small grants have been awarded for projects led by children and young people to be implemented at schools and in communities. The projects range from activities such as setting up water filter tanks for slums and remote villagers, to producing bio-fertilisers, and organizing climate change education campaigns and school festivals and other awareness raising events for children. The "Spring Award 2014", was recognized by the Vietnam Environment Administration and will be upgraded as a national award this year.

Andreas Kau and his wife show their breadfruit tree with installed bamboo water infusion system.

Peer-to-Peer Learning as an Approach to Collaboratively Addressing Climate Change

The village Benai C in Timur Tengah Utara district in Nusa Tenggara Timur (NTT) is one of the poorest provinces in Indonesia. Based on climate vulnerability research conducted by Plan Indonesia and Institute of Technology Bandung (ITB) in 2012, the semi-arid area is prone to flooding and landslides during the wet season due to high intensity of rainfall and land mismanagement, while drought occurs during the 8-month dry season.

According to Kau, a farmer in Benai C village, "during dry season, it is really hard for us to find water even for domestic purposes. It makes us hardly pay attention to our trees at farm or garden".

Farmers, Kau and Metan, adapted an indigenous practice to address the drought challenge. Both of them were inspired to develop a bamboo infuse system to take care of the breadfruit tree

Children set up the infusion system in their school garden.

samples supplied by Plan Indonesia under the child centered climate change project to support families to diversify their crops and plant trees to reduce soil erosion. A one meter bamboo tube with small holes is installed near the tree, tightened by a small rope, and the root covered with leaves to maintain soil moisture. The system works like drip irrigation to provide slow and controlled administration of water in the area of the root system. Water is distributed in a uniform and slow manner, drop by drop, in a quantity and with a frequency that depend on the needs of the plant. To regulate the water flow, holes can be sealed by thin wooden sticks.

Kau has promoted the infuse system to other farmers in their village. Metan followed the successful practice at her farm, with various kinds of trees she planted. "I saw Kau's trees are well grown and he only allocate little time and water to make it happen", says Metan. "By using infuse system we only fetch water once a month and fill it in the bamboo tube and our trees can grow more fertile, rather than watering trees each day especially during dry season", Kau adds. Thus by using the infuse system in their farm, Kau and Metan admit that they can have more time to do other work and generate income.

However, since it is considered a new technology in the village, it takes time to convince other people to use and replicate it. Thus the children from the 4CA club helped test similar methods with water bottle infusion system in their school garden.

Dion, Maria and Uno might appear calm and shy but are confident children. They went on a study tour with Plan to the neighboring island to learn about DRR and climate change.

Dion, Maria and Uno shared their learning with their peers at school, and opened a small organic garden adjacent to the school where they tested the water infusion system of famer Kau and Metan. Uno explains how their water infusion works. "Make a puncture the size of a needle on a used plastic water bottle, fill it up with water, and hold up with bamboo or wood. Put the bottle besides the plant and the water will drop slowly. If we water the plant with a bucket, it's a waste of water. But using this method, we can water the plant for 4-5 days using just one bottle of water," he explains. In the school garden behind the school, they planted betel nut, gaharu and gala-gala as well as chili and eggplants. The children applied the skills they learnt at the training to make liquid fertilisers for their plants. "Leaves from the special gamal plant, fresh buffalo manure, sugar and water are mixed, and then kept for 14 days and mixed again. After one month, we can take the water for the plants," they explained. Liquid fertilisers don't pollute the soil because the ingredients are all natural, easy to get and don't have negative effects on global warming compared to the chemical nitrogen based fertilisers that release greenhouse gases.

Children apply the skills they had learnt during a study tour to make liquid organic fertiliser that does not damage the environment.

3 **Advocacy:** Children and young people are becoming powerful advocates and leaders on climate change adaptation in their communities and regions. This is done through a peer-to-peer advocacy approach, exchange visits and connecting children with the decision-makers at national and regional levels.

Top: Climate change communicators, Ly (left) and Mon (right), explain to their peers about climate risk reduction measures in Quang Tri province, Vietnam.

Below: A youth advocator from Chiang Rai, Thailand gets creative in sharing key messages on climate change.

- Peer-to-peer activities are effective ways for children to learn from one another and build connections between their communities. Children from flood affected areas in central Thailand went on an exchange trip to share experiences with children from northern Thailand on how they can get involved in disaster risk reduction and climate change adaptation activities. In Indonesia, children from Kefa and Lembata went on a learning visit to Bali to find out about climate change adaptation practices and then shared their experiences by writing articles for their local newspaper. The children enjoy using creative means to share important messages with the community and the world, for example, through documentary films made by children in Indonesia, Vietnam, and Bangladesh, a shadow puppet shows created by children in Thailand, a website for the green generation youth network in Vietnam, and radio broadcasts by children in three ethnic languages in Laos and Indonesia.

- Documenting the perspective of children on how disasters and climate change affects their lives and their rights is a powerful message. By presenting their own experiences of participating in disaster risk reduction activities, the publication Children's Action for Disaster Risk Reduction aims to inspire other children and youth, as well as encourage local governments, NGOs and the private sector to support child-centred community risk reduction and climate change adaptation.

- Children can be convincing mobilisers for climate action. In a request for government assistance for a community in Papua New Guinea, the children's approach proved to be a winning recipe. After several unsuccessful attempts by community leaders to apply for funds, children produced a poster that showed the impact of sea erosion on part of the community's land over a timeframe of a few years. The poster, along with a short video made by the children discussing the impact that changes in the climate is having on their lives, was shown to a Member of Parliament, who immediately approved a start-up fund required to begin a project to build a sea wall.

- In Thailand, Vietnam, and Nepal, children have shared their ideas and recommendations at the national level. For example, a TV policy dialogue was employed in Vietnam and a Children and Youth Forum on Climate Change jointly organized with the Ministry of Education and Department of Disaster Prevention and Mitigation in Thailand.

- Children from across Asia offered ideas and solutions at the 5th and 6th Asian Ministerial Conference on Disaster Risk Reduction. Supporting children as visible and outspoken advocates will help push countries to prioritise children in climate change adaption as recognised in the intergovernmental declarations. Likewise, recommendations from the project have been incorporated in the Global Action Programme for Education for Sustainable Development.

Making Waves: Harnessing the Message of Children's Interactive Communication Methods

Filipino youth are coming up with creative ways of communicating climate change messages to their peers. Through sensitisation activities and training from Plan International, one example can be seen from the youth in Southern Leyte, who have produced short public service announcements (PSA) as a means of communicating simple actions and information on climate change.

Maylen is a member of the Committee on Environment at her high school in Southern Leyte who was involved in the production of climate change PSAs. Maylen's training began with climate change awareness and discussion among the youth participants. By the second day, the formulation of their PSAs commenced: guided by facilitators, they were given the liberty to create stories regarding any climate change topic under the sun and to apply them through video and audio mediums. Throughout the child-led facilitation, Maylen said she learned a lot from making the PSAs. There needs to be a lot of patience and a full understanding of what you are doing. "We also observe that there is climate change," she enthusiastically states in Filipino, "So we need to learn how to adapt to climate change. Even if we cannot eliminate it completely, we can do something to reduce its impact." Some of the examples she gave were tree planting, stopping the cutting of trees, and recycling and reducing garbage.

When asked about what made PSAs different from other mediums of communication, she said there is a big difference. Through PSAs, it is easier to catch the audience's attention compared to lectures. "If [it's] a PSA, they enjoy it while watching and listening to it," she adds.

What are the results to date?

The 4CA program is proving to be **a successful model for enabling children's participation in climate change adaptation action and advocacy.** From an initial nine countries in Southeast Asia and Pacific, it is now being implemented in 14 countries across Asia-Pacific.

There are **significant changes at the community level.** Opportunities for communities and children to learn about and build their capacity around climate change adaptation and disaster risk reduction are multiplying. Children and young people understand what is at stake for this generation and future generations not just in their community, but also for their country and region as a whole.

The project has made an impact on the lives of the target communities and children, including improvements of a sociocultural, environmental and economic (livelihood) nature. A clear majority of direct beneficiaries indicated that the project has been somewhat or very influential on their lives. For example, children and youth are in a better position to advocate for climate change action than they were prior to the project due to increased confidence, skills and knowledge. Adults report shifts in attitude to proactively seek CCA solutions and in some cases their acceptance of children's participation in community activities has increased.

The 4CA Program achieved considerable success in the following areas: building community awareness of climate change science and impacts, enabling children to have a voice in their communities on adaptation planning and action, fostering children to be advocates for change, developing local climate change educational materials, and developing partnerships with

governments to enable uptake of project outputs (to varying degrees) and, in some countries (Kiribati, Tonga, Fiji) evidence of the 4CA approach being embedded into national processes.

The project has met direct beneficiaries' needs and priorities by addressing objectives that children and adults value including: 1) new knowledge and skills about disaster and climate change as well as other relevant soft skills such as resource mobilisation; 2) exposure to new experiences, people and technologies; and 3) tangible community improvements funded by small grants. Children and youth stated that they placed most value on the knowledge and skills that they gained, while adults responded that they placed the most value on the actual asset which was provided by the grants. The 4CA's holistic approach to child centred DRR and CCA in both schools and communities makes it unique but also complex and difficult to market.

Building and supporting local actions

The **implementation of climate-smart local actions have yielded environmental and livelihood benefits** such as reduced risks, improved access to water, increased forest area, etc., which have the potential to build community resilience to climate-hazards and gradual changes. Some weaknesses were observed in the design, selection and implementation of climate-smart local actions in terms of meeting the definition of child-centred climate change adaptation. Nevertheless, the vast majority of direct beneficiaries of the project reported being very (68%) satisfied with project activities.

About two thirds of the funding for local actions were utilised to build response capacity and manage climate risks. Practices and technologies with the clear potential to enhance resilience to climate change and disaster risks were implemented and installed in participating communities. Initiatives to raise environmental awareness outnumbered the rest of the categories but these were initiatives proposed and implemented youth and children, primarily in Vietnam, comprised less than 20% of funding.

Small grant initiatives (seed funds) resulted in several co-benefits. They included gaining trust, encouraging innovation, supporting collaborative planning and decision-making, building confidence of children and youth, building project management capabilities and making visible improvements to communities and schools. However, the picture is mixed on the sustainability of these benefits without further interventions.

The Test: How A Science Test Can Mobilise Funds For Sustainable Water

Students from Sopu in Tonga test the water quality in the tanks at their school

Freshwater in Tonga comes from rainwater harvesting or extraction from a thin freshwater lens with the island's highly porous limestone. For the community of Sopu, water shortages have always been a priority issue, and with salt water intrusion due to rising sea levels and changing rainfall patterns due to climate change, it has become even more urgent. 4CA has carried out a number of activities in light of this need, especially with the children in the community.

In one such activity, the child centred climate change adaptation approach was integrated into the Sustainable Rainwater Harvesting Program funded by the European Union, involving children in implementing the program. The activity allowed children from the 4CA club to carry out a water quality experiment. The test showed their drinking water was contaminated, and the children responded to this issue by having the test findings incorporated in a proposal written by the community to USAID. The proposal was accepted and the children were awarded with 24 water tanks for their community in early 2014.

Government and institutional change

The project supports existing national climate change and disaster risk reduction strategies and policies, by bridging government capacity constraints and helping governments deliver on their mandate through facilitating consultation, socialisation of CCA/DRR concepts with communities and schools, developing CCA educational material, and engaging government staff in activities.

Institutional change was possible where policy mandates were combined with willingness and technical resources, for example, in the roll-out of climate change and DRR curriculum for schools. The 4CA project significantly supports Plan's internal strategies and policies, including the regional strategy and the global DRM strategy. The project has successfully built internal capacity in Plan on climate change adaption and DRR, introducing innovations at country and field levels.

Multiplier effects: Numerous positive unanticipated outcomes illustrate the impact of the project on external (non-project) stakeholders, and provide evidence of advocacy success. For example, the Tongan government sought children's views during a community consultation on Land Use Planning and in Tuvalu the government ratified the 'Rights of Persons with Disabilities' Convention after 4CA's activities raised the profile of disability

Cross-cutting issues: The project was partially successful in considering cross-cutting issues in project design and implementation. Relative strengths lie in the inclusion of school children and ethnic minorities, as well in consideration of gender equality. The project was unsuccessful in reaching out-of-school children and people with disabilities. Although important to include in future activities, these were not target groups at the outset of the project.

Sustainability: Plan's participatory approach to project implementation has cultivated ownership over project activities by direct beneficiaries and local governments and project stakeholders interviewed reflect willingness to sustain outcomes. Social and cultural impact in terms of knowledge/attitude and norms to address disaster risk and climate change proactively show the most potential for lasting impact. However, sustainability of the environmental and economic benefits of the activities on communities' governance capacity and government support and thus require further interventions (refresher trainings, technical support, support to mobilize future finances) or formal incentives (government mandates for example on integration of CCA in curriculum).

Plan's expansion of the 4CA approach beyond pilot countries and communities signals a belief among communities, Plan management and donors that the 4CA project has worked. International advocacy partners agree with this assessment. The project has also influenced local authorities to put DRR and CCA as a program priority in their respective districts instead of only focusing on emergency response. Most significantly, the 4CA approach has empowered children and communities to take action, advocate and secure their future social, cultural and economic prosperity in a rapidly changing world.

One Tree at a Time

"I am so proud to be a leader of my team," says Ma Myo, 12 years old, from Rakhine State, Myanmar. "I was sad that my school would flood every year during the rainy season and that we were not able to study. Now I realize why flooding happens and can educate my classmates and school with knowledge from my climate change and disaster risk management training. In addition to the training, I am so pleased that our school was renovated and converted into a concrete building this year. I feel more comfortable studying here," adds Ma Myo.

Ma Myo's village is located in coastal area of Rakhine and frequently suffers from natural disasters like flooding, storms and droughts every year. Understanding that children are often the most vulnerable in a disaster, Plan International is training children – in schools and within their communities – to understand the impacts of climate change and most importantly, to be prepared for natural disasters.

This was the first time that Ma Myo had ever heard about climate change. Through the training she and her classmates came to know the causes of climate change and global warming, the negative effects on us and what people can do to cope with impact of climate change. "When I become a leader in my school's disaster management team, I also realized that the more we cut trees, the hotter it became. We also learned what trees grow best in what climate.

With Ma Myo's support, her parents began changing their crops once they learned more about the impacts of climate change in their village. Previously, they were planting chili trees, which are more conducive to colder climates. This year, when the weather became too hot, their chili trees did not grow, and she felt the temperature of her house increasing, too. Until recently Ma Myo and her parents did not understand why certain trees would not grow under particular climates and what they could do to keep temperatures down in her home.

Most importantly, she explains, the trees are essential to preventing the heavy floods from destroying her farmlands and villages. Understanding that wood is essential to her community for building homes and cooking, she tells her parents and community members: "If you cut down a tree, then you must plant a tree".

"My parents encouraged me to join my school's disaster risk management taskforces. Now that I am in a leadership role, they listen to me and take me more seriously. I have learned to communicate with adults. Overall, I think my knowledge of natural disasters has given me more self-confidence," she adds.

Mg Wai Thaung, a 51-year-old villager and member of his community's Village Development Management Committee, agrees. He has now started growing trees around his crops to provide better shade and moisture. U Mg Wai Thaung notes that the knowledge he gained from the Village Development Management Committee training developed under Plan Myanmar's climate change adaptation project is essential when he is working on his farm. The village is based in the coastal area of Rakhine and suffers from high tides and saltwater flooding at least once a year, explains U Mg Wai Thaung. He now knows how to build and repair barricades for his field, which can prevent the tides, as well as grow certain types of crops that will withstand salt water.

"I share my knowledge with my friends and persuade them to apply their learning in real life. We have suffered a lot from natural disasters and it is time to prevent it. I am so thankful to Plan Myanmar for teaching us. I will remain actively involved in this project and I will encourage my child to remain a member of the disaster management team in school," U Mg Wai Thaung adds.

The Power of Knowledge: How Understanding Climate Change Risk Saved Lives in Philippines

Plan works with communities and children through a participatory process to analyse how climate related changes could impact their communities and encourages them to identify appropriate solutions. Each community then designs and implements unique adaptation projects using small-scale funding.

These participatory Capacity and Vulnerability Analyses (PCVAs) help children and community members to understand both the existing hazards they are exposed to, and the impacts that climate change will have on their community. This step proved life-saving for the community of Barangay Alog, in Salcedo, Easter Visayas, the Philippines. Having only recently completed their PCVA when Typhoon Haiyan landed, the Barangay Captain recognised the threat, and was able to evacuate all community members in time to a safe location. Unlike the surrounding towns and villages, no lives were lost in Alog.

The PCVA provided three key pieces for the community when Typhoon Haiyan landed. First, they were able to identify and recognise hazards. Second, they had already identified vulnerable sectors of the population such as children and the elderly. Last, they had identified and designated a safe evacuation centre for such a time.

The training and support provided through this project has also helped this community recover from Haiyan, and better prepare for the future. The local government's Annual Investment Plan (AIP) and budget were adjusted to integrate CCA and DRR, as of January 2014. In addition, they will be restricting the building of houses next to coconut trees because of the risk in tropical storms. And finally, the coconut farmers of Alog plan to plant outcrops such as cassava to improve their food security and ensure that are self-sustainable and independent of external relief.

What have we learned so far?

During the three years of project implementation in the Asia- Pacific, a number of key lessons have emerged:

- **Focus on local impacts:** Children and adults in the most marginalised areas are receptive to learning about the causes and consequences of disasters, changes in climate and weather patterns. For learning and communication on climate change to be effective, it's important to first build on their existing understanding of wider environment or disaster related issues and link climate change knowledge with people's lived experiences, by combining scientific information with local wisdom, and adopt presentation formats that accommodate for language diversity and differences in literacy.

- **Child friendly methods:** Creativity is important in designing activities with and for children to promote learning through play. Providing outdoor learning activities and engaging children in concrete hands-on tangible demonstration activities or experiments on DRR and CCA provides the greatest motivation and leads to most effective learning outcomes.

- **Working with both villages and schools** to ensure community processes factor in the implications of climate change on children's rights, as well as recognising the roles of children in building community resilience. In the first phase of the project, some countries gave more emphasis towards building the capacity of children while others focused too much on community members and teachers. Where activities were targeted mainly in schools, there is a need to plan activities to effectively engage the community. In order to do this appropriately, training for the children is required and preparation is needed when disseminating the results to the wider community. Likewise, sensitisation with the adults on meaningful participation of children is also required. Children can become local champions for change.

- **The small grants provided to test local actions that boost resilience were an effective incentive for villages, schools and youth groups to engage** in vulnerability/risk assessment and action planning. Adapting to climate change is an ongoing process involving assessment of problems, planning, implementation of solutions and learning. Adults in villages were more motivated by the prospect of funding for community improvement initiatives but tended to undervalue planning. Working with children and youth in assessment and planning, in contrast, is an opportunity to build a culture of planning and prevention.

- **Technical support, experience and exposure (e.g. through study tours) to a variety of possible adaptation options determine the range and quality of local actions proposed and implemented.** Initial seed grant proposals concentrated on short-term actions, sometimes indistinguishable from regular development or environmental awareness. Proposals presented by the third year introduced novel ideas and increased attention to long-term underlying issues. Understanding of climate change adaptation requires continuous learning to build knowledge, and skills and bring about changes in attitude and practice. By adhering to a participatory, bottom-up processes to generate ideas for climate-smart local actions, direct beneficiaries determined the pace of the discovery process. Therefore, a long term commitment must be made to monitor and support the schools and communities in their activities and efforts.

- **Direct beneficiaries can start accruing benefits from project activities within the implementation timeframe.** To increase the chances of sustaining these benefits once the project finishes, it's important to build problem-solving, financial and project management skills within villages and schools and complement capacity building with advocacy. Activities or actions taken by the communities should be linked with government initiatives at the national, sub-national, and local levels to ensure synergy and complementarity. Building networks with the various government agencies involved, local civil society organisations and other stakeholder groups is essential. However, allocation of time and resources are required to maintain these. Turnover of staff in the government agencies and within the implementing agencies of the project needs to be taken into account and carefully mitigated through knowledge management and regular capacity building activities.

Climate change is an intergenerational issue. Adults and policymakers often focus on the now. We need to bring in he perspective of children, who look into the future. In the dialogue of advocacy for change, that is a huge added value that children can bring to the table.

Children of Nasau Embark on a Climate Smart Solution to Combat Coastal Erosion in Fiji

Children and youths participated in an awareness workshop at their community hall, said Watisoni Lalavanua, Project Officer of Partners in Community Development Fiji (PCDF). "It was from this workshop that the children themselves identified eroding waterfronts as a real concern, and from them too came the idea that planting mangroves would help address the problem."

Eighteen months after the mangrove planting project the beachfront has recovered remarkably. The steps in front of the house which were exposed prior to the project are now more than half way buried in sand.

Their village along the fringes of Navitilevu Bay on the northern coastline of Viti Levu (Fiji's main and largest Island), is particularly vulnerable to flooding, storm surges, spring tides, high waves and strong winds. For the past decade or so, rising sea levels gradually chipped away approximately 20 metres of land adjacent to the coast. Where 10 homes, including the village trade stores, used to stand is now the sea. Today, the village's community hall, one of the most important infrastructures of any Fijian village, sits right on the village's fast disappearing beachfront.

With the mounting dangers of relocation, due to coastal erosion, the village was in serious need for assistance. When the village leaders raised their concerns with the provincial government, their village and five other nearby villages were made part of the 4CA program in Fiji in 2012.

Saimoni, aged 12 and Jacoro, aged 11 were amongst those that took part in the capacity building workshop on climate change adaptation, which was followed by their design of climate smart solution. In this case, their solution to the continuous beach and soil erosion was mangrove planting. "Au tei dogo", was what Jacoro said when asked what he has done about wave surges. I planted mangroves. "Ke sega na dogo, ena luvu na koro", he adds. "If we don't plant mangroves, my village will be flooded".

Under the seed grant award, PCDF purchased the mangrove seedlings and helped Saimoni, Jacoro and the other children plant and care for the mangroves. Now, eighteen months later, young mangrove plants are growing all along the coastlines of their village. The older folks showed encouragement and support to their children by erecting a stick barrier to compliment and protect the young plants.

For further information about the program, see the Act to Adapt page on WeAdapt or contact Caroline Zastiral, Regional Climate Change Specialist at Plan International in Asia, *caroline.zastiral@plan-international.org or Roshni Chand at FSPI in the Pacific roshni.chand@fspi.org.fj*

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"We, the Ministers, and Heads of Delegation of the countries of Asia and the Pacific, attending the Sixth Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) in Bangkok, 22-26 June 2014; call on all governments and stakeholders to encourage the institutionalization of integrated community resilience approaches into local development planning; giving attention to meaningful participation and positive contribution of at-risk groups such as children and youth."

Bangkok Declaration on Disaster Risk Reduction in Asia and the Pacific 2014

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