

Terms of Reference

Development of Climate Change Adaptation Tools

Introduction:

As part of its agenda for strengthening the capacity and mainstreaming Climate Change Adaptation and Disaster Risk Reduction, NDMA intends to engage the services of a Consultant/Firm for the development of child-inclusive Climate Change Adaptation CCA Tools with a focus on key priority areas of solid waste reduction, water management, energy efficiency and natural resource management. (Reference document attached).

Worldwide 70% of the pupils are enrolled in schools in high seismic zones. Over the last decade, Asia has suffered the greatest number of disasters caused by natural hazards. The aim of this activity is to minimize exposure of children to hazards and vulnerabilities and enhancing their capacities to adopt to a changing environment in the face of an uncertain climatic future.

NDMA has taken this initiative for the development of Child-inclusive Climate Change Adaptation CCA Tools with the goal to:

- Strengthen capacity of children within the education sector by mainstreaming climate change adaptation and disaster risk reduction
- Integrate climate change adaptation (CCA) tools into non-formal education through child friendly education approaches

Assignment/Deliverables:

- Inception Report
- Development of content for small booklets, activity books, posters, FAQs and any other innovative idea for interactive CCA Tools
- Designing of small booklets, activity books, posters, FAQs for interactive CCA Tools
- Printing of small booklets, activity books, posters, FAQs

Specifications of Printing of 4 Colour CCA Tools:

- Small booklets- 250 English, 250 Urdu
- Posters- 250 English, 250 Urdu
- FAQs- 250 English, 250 Urdu
- Activity books- 250 English, 250 Urdu

(Details of specs will be shared after signing of the contract)

Terms of Reference:

1. Content design and specifications for development of the CCA Tools will be decided in close consultation with NDMA.
2. Design provided will include content, format/style, layout, styling, colour, placement of photos, logo etc.
3. The Consultant/Firm will provide NDMA with proofs of all content and designs (Title, layout, colours, fonts, etc.) for reviews and approval prior to printing
4. The interactive CCA Tools will be produced in English/Urdu in simple language comprehensible to school children
5. Cost of the overall project will include content development, designing, printing and delivery of CCA Tools to NDMA.
6. NDMA will hold all copyrights to the published material

Sequence of Deliverables:

Content Development and Approval-

- Share brief description of contents with logical sequence before its development. Keep references for all material cited.
- Share detailed contents of the CCA Tools for approval

Design Approval-

- Share design options of the CCA Tools with corresponding illustrations & design elements to get approval on the font design, size, paper, colour etc.

Printing and Delivery of Kits-

- Print and deliver after final approval from NDMA.

Duration of the Assignment

60 days from the signing of the contract

Payment Schedule:

Submission of Inception Report- 10%

Submission of Content- 40%

Submission of Design- 30%

Submission of Approved Printed Tools- 20%

Quotations:

- Quotations should include technical proposal with background and past experiences
- CVs/ past experience with similar assignments
- Brief background of the topic to demonstrate conceptuality of the assignment
- Detailed work plan with timelines
- Financial proposal with a lump sum amount along with a breakdown
- All supporting documents, technical and financial proposals must be submitted as one document

Disclaimers:

NDMA may require the applicant to clarify their quotation during presentation. However the applicant may not modify their quotation after the deadline for submission of quotations.

NDMA reserves the right to stop the service hiring procedure completely or partly, temporarily or permanently until the moment of contract signing. In these situations applicants are not entitled to reimbursement of any costs or damages incurred in connection with this service hiring procedure.

Financial quotations should be valid for at least three months after the deadline for handing in quotations.

NDMA cannot be charged in any way for costs related to preparation and submission of a quotation. This can also include interviews and/or providing further information about the quotation.

The risk of any costs and/or damages which may arise by not awarding this contract to a bidder lay solely with the bidder. NDMA cannot be held responsible for any such costs or damages.

By submitting a proposal to email ID **fo.gcc@ndma.gov.pk** by **July 7th, 2017**, the applicant/firm agrees all the terms and conditions specified in this procedure and the provisions of the contract template. The proposal will not contain any reservation(s) to these terms and conditions. A proposal with one or more reservations can be excluded from the procedure.

(Reference Documents)

KEY AREAS FOR CLIMATE CHANGE ADAPTION TOOLS

Solid Waste Reduction

Solid waste originates from a variety of sources, that include electronics, plastics, metals, glass, human fecal matter, and hazardous materials that may be toxic, corrosive, radioactive, flammable, or infectious. Solid waste disposal systems are often logistically complicated and costly, including an operational chain of collection, transfer, and disposal. Solid waste disposal systems are often inadequate, if they exist at all and is frequently dumped and accumulates in canals, waterways, and areas otherwise intended for water runoff or flood control. These conditions make these cities vulnerable to floods and contaminated water from moderate rainfall, let alone intense precipitation and potential storm surges expected with climate change. Areas of uncollected waste can spread existing sources of environmental pollution and health hazards from the materials described above, as well as expand breeding grounds for water and vector-borne diseases. Informal settlements near or on top of dumped waste can also experience landslides as a result of flooding and can catch fire as a result of temperature increases.

<http://www-esd.worldbank.org/citiesccadaptation/solidwaste.html>

	SDG 12 Responsible consumption and production	Ensure sustainable consumption and production patterns
	SDG 13 Climate Action	Ensure healthy lives and promote well-being for all
	Climate Change Indicators	Droughts, altered rainfall patterns, rising sea levels
	Impact on Children	Ground water and soil contamination, air pollution causing health hazards
1	Reduce	<ul style="list-style-type: none">i. Reduce the amount of new things you buyii. Bring garbage free lunch to school. Put it in a reusable lunch box instead of aluminum foil or paper bags.iii. Refuse to use disposable plastic glasses and plates. Bring your own mug and eating utensils to use at school.iv. Use a refillable bottle instead of disposable plastic bottlesv. Avoid black trash bags. Because of the black pigmentation these trash bags cannot be recycled.vi. For school and other activities use as little paper as possible: photocopy and print on both sides. Print only if really needed. You may also print two pages per page
2	Reuse	<ul style="list-style-type: none">i. Try to borrow or rent things you'll only need for a short amount of time, and reuse the things you already have. When you have things you no longer need, give them to others who can use them.

		<ul style="list-style-type: none"> ii. Use reusable bags when you go shopping. iii. If you get a present in a gift bag, save the bag and use it again
3	Recycle	<ul style="list-style-type: none"> i. Collect your scrap paper. Use it for drawing and notes. ii. Invent a new use for a common household rubbish item (plastic bottles, containers, cans, jars, paper, cardboard, wood, bags, boxes), which would otherwise be thrown away. iii. Buy second-hand books and other goods saves energy and money. Give away the things you do not need

Water Management

Clean water supply and sanitation are imperative for public health. Unsafe water and substandard sanitation infrastructure are presently among the primary risk factors for diarrhea, the second leading contributor to global disease burden ([UN-Water 2011](#)) Water is the primary medium through which climate change influences Earth's ecosystem and thus the livelihood and well-being of societies. Responding to the challenges of climate change impacts on water resources requires adaptation strategies at the local, regional, national and global levels. Society needs to find ways to adapt to the changes that are expected and to render its water infrastructure and services more resilient in coping with new conditions and extreme weather patterns.

	SDG 6 Clean water and sanitation	Ensure availability and sustainability management of water and sanitation
	SDG 3 Good health and well-being	Ensure healthy lives and promote well-being for all
	SDG 12 Responsible consumption and production	Ensure sustainable consumption and production patterns
	SDG 13 Climate Action	Ensure healthy lives and promote well-being for all
	Climate Change Indicators	Droughts, altered rainfall patterns, rising sea levels
	Impact on Children	Scarcity of clean water for cooking, drinking and livestock. Contaminated water supplies. Damaged water pipes causing human waste to leak into pipes and increasing salinity of ground water. Dirty water and poor sanitation. Waterborne diseases like diarrhea disease which is the second largest killer of children worldwide. Repeated episodes can make children more vulnerable to other diseases and malnutrition.
1	Water Waste Reduction	<ul style="list-style-type: none"> i. Saving water saves energy, which in turn reduces greenhouse gas emissions. It takes a lot of energy to treat the water you use every day to make it safe to drink and to deliver it to your house. It takes even more energy to turn it into hot water. Letting your

		<p>faucet run warm water for five minutes uses about as much energy as leaving a 60-watt light bulb on for 14 hours?</p> <p>ii. Save hot water and energy by taking a shower rather than a bath. A bath uses 90 liters of water. A 5-minute shower uses only 30 liters of water.</p> <p>iii. Turn off the water when soaping yourself under the shower or brushing your teeth. Cleaning your teeth with the tap running uses 6 liters of water. Cleaning them with the tap off uses less than 1 liter of water.</p> <p>iv. Cleaning your teeth with the tap running uses 6 liters of water. Cleaning them with the tap off uses less than 1 liter of water.</p>
2	Water Conservation	<p>iv. Collect rainwater and use it to water your plants.</p> <p>v. Water the lawn in the morning or in the evening, not the middle of the day</p> <p>vi. Fix leaking faucets. A faucet that leaks at a rate of one drip per second can waste more than 3,000 gallons of water in a year.</p>
3	Water Sanitation & Disease Prevention	Effective water treatment techniques, such as boiling, chlorination, filtration and safe storage.

Energy Efficiency

A sustainable energy system—including energy efficiency, low-carbon urban development strategies, and renewable energy sources—is an important ingredient of building resilience. While energy efficiency has frequently been referred to and used as a tool for carbon mitigation (i.e., reducing greenhouse gas emissions from energy production and consumption in order to avoid climate change), it also can serve an important role in climate adaptation: it can help address increased energy demand and constrained supply due to regional weather shifts and greater temperature volatility. (Energy Efficiency- A Tool for CC Adaptation)

	SDG 7 Affordable and Clean Energy	Ensure access to affordable, reliable, sustainable and modern energy for all
	SDG 12 Responsible consumption	Ensure sustainable consumption and production patterns
	SDG 13 Climate Action	Ensure healthy lives and promote well-being for all
	Climate Change Indicators	Rising temperatures, heat waves, droughts, unpredictable rainfall patterns
	Impact on Children	Heat stroke
1	Power Down	<p>i. Turn out the lights when you leave the room</p> <p>ii. Turn off electronic devices when not in use. Simply turning off your TV, VCR, computer and other electronic devices can save each household thousands of pounds of carbon dioxide each year.</p> <p>iii. Some appliances and electronics plugged into an outlet still use power, even when they're turned off. Unplug energy vampires like</p>

		<p>video game consoles, cell phone chargers, and MP3 players whenever you can.</p> <p>iv. Commit to using your television or computer less each day.</p>
2	Energy Efficiency	<p>i. Energy-efficient appliances and electronics typically use between 10 and 50 percent less energy than regular models.</p> <p>ii. Buy a laptop instead of a desktop. Laptops can use up to 80% less energy than a desktop</p> <p>iii. Use rechargeable batteries</p> <p>iv. Get energy efficient lightbulbs. Replace the bulbs in your home or school. They last longer and use less electricity than conventional bulbs.</p> <p>v. Use natural light as much as possible. Adjust your curtains or blinds to let in as much light as possible during the day.</p> <p>vi. If you have an air conditioning or heating system at home, try to use it as little as possible. During the winter turn down the heating and put on an extra jumper.</p>
3	Managing Vehicle Emissions	<p>i. Encourage your family to make one big trip to run all errands, instead of making lots of small trips.</p> <p>ii. Drive less. Walk, consider carpooling and use public transportation like buses</p> <p>All of these things can help reduce gas consumption and one pound of carbon dioxide for each mile you do not drive.</p>

Natural Resource Management

“Environmental protection, as a component of sustainable development and consistent with poverty alleviation, is imperative in the prevention and mitigation of natural disasters”. According to IUCN-The World Conservation Union, conservation is the protection of the integrity and diversity of nature while ensuring that any use of natural resources is equitable and ecologically sustainable.

	SDG 15 Life on Land	Ensure access to affordable, reliable, sustainable and modern energy for all
	SDG 13 Climate Action	Ensure healthy lives and promote well-being for all
	SDG 1 No Poverty	End poverty in all its forms
	SDG 2 Zero Hunger	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
	Climate Change Indicators	Altered rainfall patterns, deforestation, floods, cyclones, heat waves, starvation
	Impact on Children	Malnutrition
1	Tree Plantation	i. Plant a tree. A single tree can absorb one ton of carbon dioxide over its lifetime. Trees help to slow climate change because they absorb carbon dioxide during photosynthesis. Trees also provide shade, which helps keep streets and houses cooler in the summertime and reduces the need for air conditioning.
2	School & Communal Gardening	i. Grow a variety of foods – vegetables, fruits, legumes ii. Improve diet with home-grown foods iii. Increase preference for and consumption of vegetables and fruits iv. Foster entrepreneurial skills