# SARNET International Conference Showcases Rainwater Harvesting as a Sustainable Solution for Climate Resilience and SDG Achievement"

The 2nd SARNET International Conference on Rainwater Harvesting, a Sustainable Solution for Climate Change Resilience and Achieving SDGs, was successfully held on May 17th and 18th, 2023, at the International Water Management Institute (IWMI) in Colombo, Sri Lanka.

The conference brought together international participants and 27 presentations were done by the professions, academics, researchers, government, and private sector officials from various countries, including Sri Lanka, India, Bangladesh, Pakistan, Nepal, Iran, Arabia, Malawi, Uganda, and Saudi Netherlands. The International conference was organized by the South Asia Rainwater Network collaboration with Lanka Rain Water Harvesting forum (LRWHF) and International Water Management Institute (IWMI) with the support of USAID Sri Lanka.





The first day of the conference commenced with the inauguration ceremony, graced by esteemed A.C.M. Nafeel, quests, Mr. the Additional Secretary to the Ministry of Water Supply and Estate Infrastructure Development, and Mr. Kevin Dean, Director of the Office of Governance and Vulnerable Population at USAID Sri Lanka and Maldives. Dr. Mathew McCartney, Research Group Leader for Sustainable water Infrastructure and International the Ecosystems at Water Management Institute, delivered an insightful keynote speech, while Mr. Ramveer Tanvar, popularly known as "The Pondman of India," captivated the audience as the guest speaker.

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The technical session one started with the theme "Rainwater Harvesting as a Means of Achieving Safe Water and Sanitation at the Household Level." Diverse presentations were delivered during this session, shedding light on various aspects of rainwater harvesting and its potential impact on household water sources and sanitation. Technical session one was chaired by Eng. Syed Zaheer Hussain Gardezi from Pakistan, with Ms. Sony Pun from Nepal serving as the rapporteur. The session provided a platform for fruitful discussions and exchange of ideas among the participants.

In the afternoon of Day O1, the conference continued with Technical Session Two, focusing on the theme "Rainwater Harvesting in Urban Areas: Operational Policies and Institutions." This session delved into the policies and institutions required for the successful implementation of rainwater harvesting in urban settings. Technical Session Two was chaired by Mr. M.M.M. Aheeyar from Sri Lanka, with Dr. Jos Raphael from India serving as the rapporteur. The interactive discussions following the technical sessions provided an opportunity participants to engage in meaningful exchanges of ideas and experiences, fostering collaborations and expanding knowledge in the field of rainwater harvesting.



On the second day of the conference, the participants gathered for a recap of the previous day's events, which was presented by Dr. Tanuja Ariyananda, the convener of the South Asia Rainwater Network (SARNET). This served as a reminder of the valuable insights and discussions that had taken place.

The technical session three of the conference focused on the theme of socioeconomic benefits and disaster risk reduction through Rainwater Harvesting Presentations during this session shed light on the practical applications of RWH in various contexts. The Technical Session three was chaired by Dr Sarika Kulkarni and Dr Manoj P Samuel served as the rapporteur, both are from India.



Following the technical session, a panel discussion took place, with the panelists Mr. Han Heijnen, Dr. Sarika Kulkarni, Mr. Rajindra Ariyanbandu, and Engr. Syed Zaheer Hussain Gardezi. The interactive discussion provided a platform for in-depth conversations on rainwater harvesting and its potential for addressing climate change and achieving sustainable development goals.

Furthermore, the conference included an experience sharing session by participants of the Residential Technical Training Programme on Rainwater Harvesting Storage, which had taken place from May 11th to May 16th, 2022, in Mahiyanganaya, Sri Lanka. Participants had the opportunity to share their learnings and insights from the training program, further enriching the conference discussions.

Towards the end of the conference, a certificate awarding ceremony was held to recognize the participants' contributions and achievements in both the technical training and the international conference. The conference concluded on a positive note, with participants leaving inspired and equipped with valuable knowledge and experiences to further promote rainwater harvesting.

The 2nd SARNET International Conference on Rainwater Harvesting was undoubtedly a event that significant highlighted the importance of rainwater harvesting as a sustainable solution for climate change resilience and achieving the Sustainable Development Goals (SDGs). The presentations discussions showcased innovative and approaches, research findings, and success stories, inspiring participants to continue their efforts towards effective rainwater harvesting practices. With the collective expertise and dedication of international participants, it is hoped that rainwater harvesting will be further promoted and implemented worldwide, contributing to a more sustainable and resilient future for all.



## Professionals from six countries gathered to Sri Lanka for a Technician Training program of rainwater harvesting Storage Construction

A five-day Technician Training program for constructing Rainwater Harvesting Systems (RWHS) was conducted in Mahiyanganaya, Sri Lanka from 11 May to 16 May 2023 with the aim of strength the network and exchange the knowledge among members of the South Asia Rainwater Network (SARNET) Professionals from India, Nepal, Pakistan, Bangladesh, Iran, Uganda, and Malawi participated for the training program. It officially begun on 11 May 2023 at Rain Center, Battaramulla with the awareness session. Dr. Tanuja Ariyananda (CEO, Lanka Rain Water Harvesting Forum) conducted the awareness session, which covered the theoretical aspects of rainwater harvesting, the importance of RWH, and Ferro-cement technology. On the 12th May the participants traveled to Mahiyangana in the Badulla district of Sri Lanka to follow the practical sessions on construction of Sri Lankan pumpkin shaped RWHS and Calabash RWHS from African region. Eng. Deva Hapugoda supervised the pumpkin RWHS and five skilled masons gave their contribution to the training.

Eng. Shahadat Hossain, Managing Director and CEO of O.CREEDS Ltd, Bangladesh is one of the active members of technician training program. He shared his thoughts,

"Pumpkin shaped- ferro cement RWHS is not use in Bangladesh, therefore the training was completely new concept to me. Knowing each other's technologies as neighboring countries is also a good initiative for development" and ferro-cement technology is more environmentally friendly than using a plastic tank. I am planning to build the pumpkin shaped 5000L RWHS in Sreemangal area in Bangladesh."

Dr. Khalid Mahmood is an assistant professor for space science at University of the Punjab, Pakistan.

"During my research in the northern region of Pakistan, I discovered that people there either purchase water or collect it daily from natural sources. Surprisingly, water storage is not a common practise among the locals. However, after undergoing training, I developed an idea that could potentially address the water crisis, particularly in hilly areas of Pakistan. I will propose the implementation of ferro-cement Rainwater Harvesting Systems (RWHS) as a viable solution". He also noted the importance of organizing this type of collaborative and engaging events, "Despite participants coming from seven different countries, the training provided a sense of unity and belonging. It truly felt like home to us. I also highlighted the successful coordination and execution of the training program by LRWHF and SARNET." Moreover, he said "Throughout the construction, beneficiaries have the opportunity to witness the system taking shape. This not only ensures that they receive a RWHS but also instills a sense of ownership and responsibility towards the system. Consequently, the beneficiaries are more likely to maintain the system effectively, thus positively impacting its long-term sustainability".



A series of activities captured on the camera during the training program

Mr. Kule trained the international participants as well 4 local masons on construction of Calabash tank. He mentioned,

"I was glad to be there as a trainer because everyone asked questions during the training, it showed their interest of it, of course everyone gained from the training very well. In the Calabash system, there is no built-in water filtration system, whereas the ferro-cement tank incorporates a well-designed filtration system that utilises natural purification materials. Inspired by the successful implementation of this system in Sri Lankan RWHS, I strongly believe that we should adopt it in my area of Uganda. There, approximately 80% of the population still lacks access to piped water. In fact, my own mother has to travel 4-5 kilometers daily to fetch drinking water. By implementing the filtration system, we can collect and store high-quality rainwater suitable for drinking purposes."

### தாகம் தீர்த்தது மழைநீர் தாங்கி

முல்லைத்தீவு மாவட்டத்தில் புதுக்குடியிருப்பு பிரதேச செயலகப் பிரிவில் தேவிபுரம் எனும் கிராமம் உள்ளது. இங்குள்ள மக்கள் பெரும்பாலானோர் கூலி தொழில் மற்றும் நெற்பயிர்ச்செய்கை செய்து வருகின்றார்கள். வருமை மற்றும் வறட்சியால் இக்கிராமம் மிகவும் பாதிக்கப்பட்டுள்ளது. பொருளாதார பிரச்சனை ஒருபக்கம் இருக்க இவர்களின் குடிநீர் பிரச்சனை மிகப் பெரும் பிரச்சனையாக காணப்படுகின்றது. இக்கிராம மக்களுக்காக அரச சார்பற்ற நிறுவனங்களுடன் சேர்ந்து புதுக்குடியிருப்பு பிரதேச செயலகம் 1 பொதுக்கிணறு (கோவிலில் அமைத்து கொடுத்துள்ளனர். இருந்தபோதும் கடும் வறட்சியான நேரங்களில் இக்கிணறுகளின் நீர் மட்டமானது மிகவும் குறைவாகக் காணப்படுகின்றன. ஒவ்வொருவரும் கிட்டத்தட்ட 3-5 கிலோமீற்றர் தூரம் வரை பயணித்துதான இவர்கள் குடிநீரினை இக்கிணற்றில் இருந்து எடுக்கவேண்டியதாக இருந்தது. இதனால் சுத்தமான குடிநீர் என்பது இவர்களுக்கு ஒரு கேள்விக்குறியாகவே இருந்து வருகின்றது.

இக்கிராம மக்களுக்காக பிரதேச செயலாளரின் பரிந்துரைக்கு இணங்க எங்களிடம் பரிந்துரை செய்திருந்தனர். அதற்கமைவாக அவர்களுக்கு உதவும் நோக்குடன் இலங்கை மழைநீர் சேகரிப்பு நிலையம் மற்றும் ஐனுநுயு நிறுவனத்துடன் இணைந்து குடிநீர் பிரச்சனையை தீர்க்கும் முகமாக 5000டு கொள்ளளவுடைய பிளாஸ்ரிக் மழைநீர் சேகரிப்புத் தாங்கிகளை கடன் மூலம் அதாவது சிறு தொகையினை பயனாளிகள் கடனாக செலுத்த்துவதுடன் மிகுதி பணம் மாணியமாகவும் இவர்களுக்கு வழங்கப்பட்டது. இதனடிப்படையில் இந்நிபந்தனைக்கு விரும்பிய பயனாளிகளுக்கான விழிப்புணர்வு கருத்தரங்குகள் கடந்த 2022ம் ஆண்டு ஜனவரி மாதங்களில் நடாத்தி, எமது பணிகளை ஆரம்பித்தோம். தற்போது இக்கிராமத்தில் 5000லீ கொள்ளளவுடைய 17 பிளாஸ்ரிக் தாங்கிகளை அமைத்துள்ளோம். அத்துடன் மேலும் இவ்வருடம் 11 பயனாளிகளுக்கான மழைநீர் சேகரிப்பு தாங்கிகளை அமைப்பதற்கும் தெரிவுசெய்துள்ளோம்.

2023 மே மாதம் இக்கிராமத்திற்கு சென்றபோது, **திருமதி மங்கலேஸ்வரி அவர்கள் சில கருத்துக்களை எம்மோடு பகிர்ந்து கொண்டார்** 



நான் திருமதி மங்கலேஸ்வரி. தேவிபுரம் கிராமத்தில் சிறு வயதிலிருந்து வசித்து வருகின்றேன். இங்கு நாங்கள் குடிநீருக்காக பெரும் கஸ்டப்பட்டு வருகின்றோம். கோவிலில் உள்ள கிணற்றினிலேயே நாங்கள் குடிநீர் எடுக்கின்றோம். இது மிகவும் எமக்கு சிரமமாக காணப்பட்டது, ஏனெனில் நெடுந்தூரம் பயணிக்க வேண்டியதாக சிறு தோட்டங்கூட செய்ய முடியாத நிலை காணப்படுகின்றது. இருந்தது. இந்நிலையில் நாங்கள் இருக்கும்போதுதான், 2022ம் ஆண்டு ஜனவரி மாதத்தில் மழைநீர் சேகரிப்பு அமைப்பினரால் எமக்கு ஒரு விழிப்புனர்வு கருத்தரங்கு நடாத்தப்பட்டது. அதில் எமது குடிநீர் மற்றும் இதர தேவைகளுக்கான நீர் பிரச்சனை பற்றி ஆராயப்பட்டது. அதன் பின் எமக்கு கடன் மற்றும் மாணியம் முறையில் 5000லீற்றர் கொள்ளளவுடைய மழைநீர் தாங்கிகளை வீடுகளில் அமைத்து தர முன்வந்தனர். அதன் பின் தொடர்ந்த நாட்களில் நிறுவனத்தினரால் கூறப்பட்டது போல் மழைநீர் சேமிப்பு தாங்கிகள் நிறுவப்பட்டன. தற்போது நாங்கள் குடிநீருக்கான பிரச்சனையில் இருந்து விடுபட்டு வருகின்றோம். இதனால் குடிநீருக்காக பொதுக் கிணறுகளில் வெயிலில் நின்று நீரினை எடுக்கத்தேவையில்லை. அத்துடன் எங்களது நேரம் சேமிக்கப்பட்டுள்ளன. அத்துடன் வாதநோய் காரணமாக எனது இரு கால்களும் இயலாமல் உள்ளது. என்னால் நடக்கவோ சைக்கிள் ஓடவோ நிற்பதோ தற்போது மிகவும் கடினமாக உள்ளது. இந்நேரத்தில் இத்திட்டம் கிடைத்ததால் நான் பெரிய ஒரு கஸ்டத்தில் இருந்து மீண்டுள்ளேன் என நினைக்கின்றேன்.

எங்கள் நிலைமையினை கருத்தில் கொண்டு எங்களுக்கு உதவி செய்த இலங்கை மழைநீர் சேமிப்பு மன்றம் மற்றும் ஐனுநுயு நிறுவனத்தினருக்கும் எங்களது மனமார்ந்த நன்றிகளை தெரிவித்துக் கொள்கின்றோம். அத்துடன் இதுபோன்ற திட்டங்களை மற்றவர்களுக்கும் கிடைக்க ஆவணைசெய்யுமாறும் கேட்டுக்கொள்கின்றேன். என அவர் தெரிவித்தார். அத்துடன் இக்கிராமத்தின் வளர்ச்சியில் மற்றும் இக்கிராம மக்களின் வாழ்வாதாரம் உயர்த்தப்பட்டமை மற்றும் சுத்தமான குடிநீர் பிரச்சனை தீர்க்கப்படுவதையிட்டு மழைநீர் சேகரிப்பு மன்றத்தினராகிய நாங்களும் பெருமகிழ்வடைகின்றோம்.

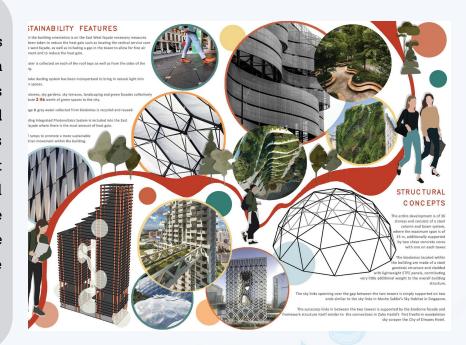
## Rain talk webinar for the Innovative Rainwater Harvesting System Design for High Rise Buildings

- from the Architectures perspective

Lanka Rain Water Harvesting Forum, in collaboration with the City school of Architects in Colombo Sri Lanka, conducted a webinar called "Rain Talk" focusing on the title of "Innovative Rainwater Harvesting System Design for High Rise Buildings". The main purpose of this virtual session was to promote Climate Sensitive, Innovative, and Smart Sustainable Designs of rainwater harvesting in a highly densified public, and commercial buildings in the Urban context. The 3 young presenters at this events are Ms. Dinu Wanigasuriya, Ms. Ashvini Jayathilaka and Ms. Poorni Randeniya from the City School of Architects.

#### Why SMART buildings are important?

50% of environmental pollution is happening because of the construction field. Making buildings SMART means using resources efficiently and sustainably. So when designing buildings with the SMART concept, buildings mix with nature, take advantage of a tropical climate, and save energy for the future through urban architecture, it will be self – sufficient also it can attract more human interventions.



The designing of buildings with the integrated rainwater harvesting system mainly focusing the relationship between the built environment and the environment. The presenters emphasized the importance of designing high-rise buildings with energy saving using solar / wind and also saving water through establishment of a rainwater harvesting system for the present and future. As for the potential of installing rainwater harvesting systems for high-rise buildings, they identified that it helps to control flooding on site and promotes water saving as a supplementary source and this is useful in disaster management.

More information: https://youtu.be/9bXqhcZouew









## බ/කන්දේගම මහා විදනාලයේ සිසු දරුවන්ට දිය බිදක්

බදුල්ල දිස්තික්කයේ ඊදීමාලියද්ද කොට්ටාසයේ පිහිටි අති දුෂ්කර පාසලක් වන බ / කන්දේගම මහා විදහලය සිසු දරුවන් 180 ක් හා ගුරුභවතුන් 20 කින් සමන්විත පාසලක් වන අතර ගමේ චිදිනෙදා ජීවිතය සරිකර ගැනීමට මහත් වෙහෙසක් දරන අහිංසක දෙමාපියන්ගේ දරුවන්ට නැණ ගුණ පැදීමට ඇති පාසලකි . වර්ෂ 1950.07.07 වැනි ඇත අතීතයේ ආරම්භ වී මහත් බාධක රැසක් මැද්දේ මේ තාක් දුරක් පැමිණි ගමන් මග තුල පාසැල අධනපනික හා කීඩාමය වශයෙන් ලබා ගත් ජයගුහණ බොහොමයකි. නමුත් මෙහි සිසු දරුවන් ඉගුනුම ලබන්නේ බාධක හා කම්කටොලු රැසක් මැද්දේය.

පවතින ජලය පරිභෝජනයට පුමාණවත් නොවීම , මානව සම්පත හිගකම , භෞතික පාග්ධනය හිගකම , සනීපාරක්ෂක ගැටළු චී අතර වේ .ඉන් ජල අවශ¤තාවය මුලික තැනක් ගනී . මක්නිසාදයත් කන්දේගම මහා විද¤ාලය කදුකරව පිහිටි පාසලක් බැව්න් ළිං ජලය ලබා ගැනීමට පමණක් නොව, වැවකින් හෝ ඇල මාර්ගයකින් හෝ ජලය ලබා ගැනීමට පවා නොහැකි තත්වයක පැවතීමයි.



පර්නෝඩ් රිකාඩ් ආයතනයේ හා ලංකා වැසි ජල රැස් කරන්නන්ගේ සංසදයේ නිලදාරින් වනපෘති සමීක්ෂණය

මෙම පුදේශයේ ජල ගැටලුව ඉඩෝරය කාලයට ඉතාමත් උගු වේ. චිබැවින් ඉඩෝර කාලයට ජලය ලබා ගැනීමට සිසුන් ඉතා අනාරක්ෂිත ස්ථාන කරා යෑමට පවා පුරුදු වී සිටි. බිමට සුදුසු ජලය සිසු දරුවන් නිවාස වලින් රැගෙන පැමිණියද , දරුවන්ගේ සනීපාරක්ෂක අවශෘතා සපුරා ගැනීමට පවා ඉඩෝර කාලයට දෙමාපියන්ට කලගෙඩිවල ජලය රැගෙන චීමට සිදු වී ඇත.දැනට පරිභෝජනට ගන්නා නළ ලිදෙහිද කුඩු මිශු ජලය නල පද්ධති හරහා ජල ටැංකි වලට පැමිණීම නිසා චීම ජලයද බිමට ගැනීමට අපහසු තත්වයක පවතී.

ඉතාම සෝචනීය කරුණ නම් සිසු දරුවන්ගේ බොහෝ දෙමාපියන් වකුගඩු රෝගයෙන් පීඩා විදින අතර , මෙම දරුවන්ටද අනාගතයේ මෙම රෝගය උරුම වීමේ සම්භාවිතාවය ඉතාමත් ඉහල මට්ටමක පැවතීමයි. මෙම දුෂ්කර තත්වයන් සලක බලා පර්නෝඩ් රිකාඩ් ආයතනයේ මූලූ අනුගතය හා ලංකා වැසි ජල රැස් කිරීමේ සංසදයේ තාක්ෂණික අනුදැනුම ලබා ගනිමින් සිසු දරුවන් ඇතුළු පාසල් පුජාවට පානීය හා සනිපාරක්ෂක අවශනතා ඉටු කර ගත හැකි වන පරිදි වැසි තැම්පත් කල හැකි ටැංකි 4 ක් ඉදිකර දීම සිදු වූ අතර එහි මුළු ජල ධාරිතාවය ලීටර් 20,000 කි. ජලය නොමැති කාලයන්හිදී වැසි ජලය අපතේ නොයවා පුයෝජනයට ගන්නා ආකාරය Rain water saves lives යන්න පහදා දෙමින් මෙම වනපෘතිය සිසු අයිතියට පත් කෙරුණි. කන්දේගම පාසලේ ගරු නියෝජන විදුහල්පතිතුමන් එතුමාගේ කෘතවේදීත්වය අප හා බෙදා ගත්තේ මෙසේය.

වැසි ජලය චික්රැස් කරන්නන්ගේ සංසදය හා පර්නෝඩ් ඊකාඩ් ආයතන<mark>ය</mark> චික්වී කරන වැස<mark>ි ජලය පානීය</mark> ජලය බවට හේතුවෙන් කන්දේගම විදහලයට බල<mark>පා තිබූ විශාල ගැ</mark>ටලුවකට විසදුමක් ලැබුන බවත් ඒ සදහා දායකත්වය ලබා දුන් සියලු දෙනාට පාසල් පුජාවගේ ස්තුතිය පුද කරන්නේ ඉතාමත් සතුටිනි .

*්ඉතින් අප සැම වසන්තය එන තුරු බලා සිටින්නෙමු "* 

කන්දේගම විදහලයේ නියෝජන විදුහල්පති .



### වැහි කවිය

පුංචි පුංචි වැහි බිදු මෙන් පොලව සිඹින ගහ කොල මල් පිබිදී අහස බලන කුරුලු පැටව් කීචි බීචි නද පතුරන වැස්ස වහී මුලු ලොවටම ආසිරි කැන්දන

සූරිය කුමරිය සිනා සිසී රැස් විහිදන කුසුම් පිපී පරිසරයම සුවද කරන පිනි බිදු කැට මුතු සම සිනහ නගන වැසි දෙව් දුව විත් මුළු ලොවටම සිරි කැන්දන

දෙගොඩ තලයි ඇල දොල මහ හඩ නගමින් තිත්ත පැටව් පීනන්නේ හරිම තුටින් කොක් රාලහමි ඇවිත් සිල් රකින ලෙයින් මුළු ගම අද සිනහ නගයි වැස්ස ඇවිත්

> Ayothri Ashenika, University of Moratuwa.

### Rain poem

Oh rain oh rain why must you always ruin my day.
You wash my plans all away.
You dirty my garden with your muddy puddles and
leave no space for me to play.
You always fade my little smile away.

Don't baby think like that,

please rain come quickly
Baby birds and flowers waiting for you
trees need energy and wind needs cold of you
whole world need blessing of you

Onelie Rathnapala, Musaeus College - Grade 5 Colombo.



Please send your creations, ideas, letters, articles, suggestions to the address given.

ඔබේ අදහස්, යෝජනා,නිර්මාණ සහ ලිපි මෙම ලිපිනයට එවන්න

உங்கள் ஆக்கங்களையும் ஆலோசனைகளையும் கட்டுரைகளையும் பின்வரும் முகவரிக்கு அனுப்பி வையுங்கள்.

#### Rain Center

No. 41/12, New Parliament Road Pelawatta, Battaramulla, Sri Lanka Telephone: 0115524612 Fax: 0112077620

### වැසිජල කේන්දුය

අංක 41/12, නව පාර්ලිමේන්තු පාර, පැලවත්ත, බත්තරමුල්ල ශී ලංකා

දුරකථනය: 0115524612 ෆැක්ස් : 0112077620

#### மழைநீர் மையம்

இல. 41/12 புதிய பாராளுமன்ற வீதி பெலவத்தை, பத்தரமுல்ல, இலங்கை தொலைபேசி: 0115524612 தொலைநகல்: 0112077620