

2017



FINAL REPORT

#COMPLUMBING

IWSH.org

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Community Plumbing Challenge 2017: Final Report



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AIMS AND OBJECTIVES

The international Community Plumbing Challenge program

The international Community Plumbing Challenge aims to contribute to improvements to public health through collaborative, community-based programs of design, construction and education in regions where communities are still threatened by a lack of basic sanitation and safe drinking water systems.

The Community Plumbing Challenge was first piloted as a 'Water Innovation Challenge' event at Singapore International Water Week 2014. The first edition of Community Plumbing Challenge (**CPC2015**) was hosted by the Indian Plumbing Association in **Nashik, India** in November 2015. The second Community Plumbing Challenge (**CPC2016**) was hosted by WASSUP Diepsloot and Sticky Situations in **Diepsloot, South Africa** in July 2016.

2017



001

IMAGES

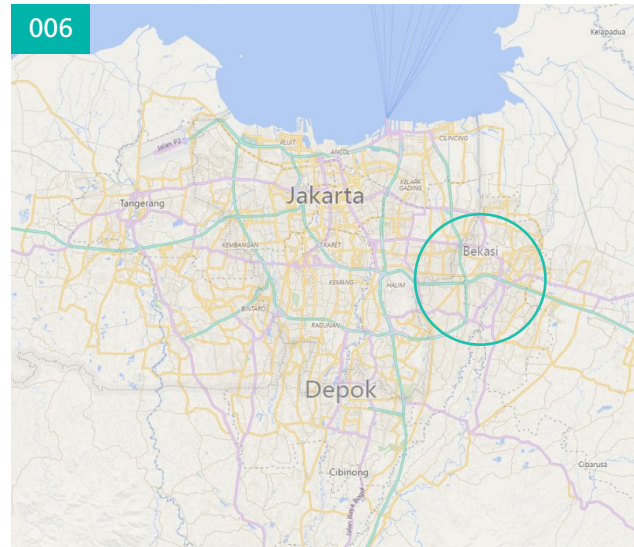
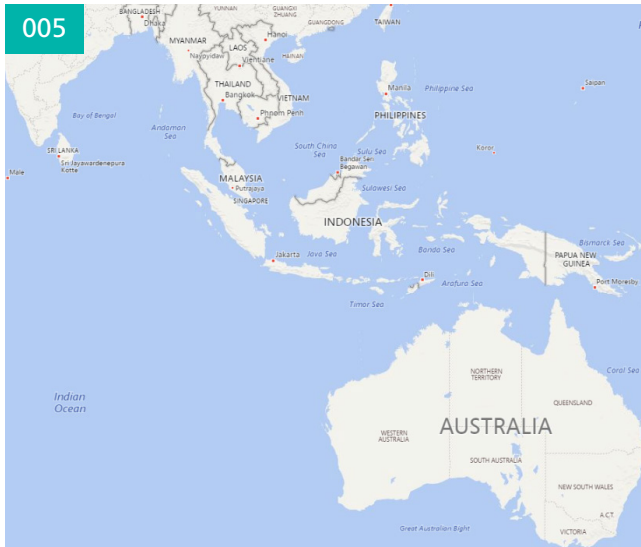
- 001: Community Plumbing Challenge emblem.
- 002: Water pump assembly at pilot event in Singapore.
- 003: Morning assembly at School 125, Nashik, India.
- 004: Diepsloot community welcoming CPC2016.



2017

COUNTRY SELECTION: INDONESIA

A third host country in three years



In late 2016, management of the International Water, Sanitation and Hygiene Foundation (IWSH) identified **Indonesia** as a potential location for the next international Community Plumbing Challenge program: Community Plumbing Challenge 2017 (CPC2017).

PT. IAPMO Group Indonesia – a developing presence in the country since 2008, and having recently opened a new research, testing and certification facility in the Cikarang/Bekasi area in 2016 – was identified as the potential host partner for this program.



IMAGES

- 005: Location of Indonesia, South-East Asia.
- 006: Location of Cikarang/Bekasi, West Java.
- 007: PT. IAPMO Group Indonesia staff with IAPMO Group CEO GP Russ Chaney (fourth from left) in Jakarta on World Plumbing Day 2017.
- 008: PT. IAPMO Group Indonesia now hosts the third IAPMO R&T recognized laboratory, alongside Ontario, California (U.S.) and Guangzhou, China.

SITE SELECTION VISITS

Identifying potential CPC2017 host location

In February 2017 an IWSH/CPC2017 organizing team visited **eight schools** – including one kindergarten and one orphanage – in the Cikarang/Bekasi region: a cross-section prepared and nominated by PT. IAPMO Group Indonesia staff. The purpose of these visits was to inspect and understand typically existing conditions, surroundings and needs re. school water supply, wastewater and handwashing facilities in this locality. In order, the sites/ locations visited were:

TK Tunas Bangsa, Cicau

SDN Cicau 02

Yayasan Miftahul Hikam Sempu, Cicau

SMP Al Chaidar

SMP Al Mumin

SDN Sukamanah 03

SMP Al Maliyah

An Nabil

IMAGES

009: Entering a toilet at SMP Al Chaidar.

010: Toilets and water supply at SDN Sukamanah 03.

011: Schoolchildren outside SMP Al Mumin.

012: Outdoor tap point and trough at An Nabil.



SITE SELECTION: SDN CICAU 02

Most suitable location determined

Following these site visits, **Sekolah Dasar Negeri 02** (SDN; 'Public Elementary School') in Cicau village, Cikarang, was selected as the most suitable location for the proposed CPC2017 program. This government-funded school was located in the neighbouring village to the new PT. IAPMO Group Indonesia research and testing facility: a key factor for the organizing team in making sure the ensuing program would be transparent, responsible, and connected with its local community.

At SDN Cicau 02 it was anticipated that CPC2017 would address renovation of the existing toilet facilities, construction of new toilets via extensions to the existing buildings, and installation of a new septic tank and wastewater system in the school grounds.

IMAGES

013: PT. IAPMO Group Indonesia Engineer Jati Pambudi looks at site plans at SDN Cicau 02.

014: One of only four toilets at SDN Cicau 02, which combined were shared by over 300 students and 12 staff at the school.

015: Inspecting existing water tank at SDN Cicau 02.

016: Entrance to toilets at SDN Cicau 02.



AIR Bersih membuat Hidup kita Sehat
Jadi kita harus hemat air

2017

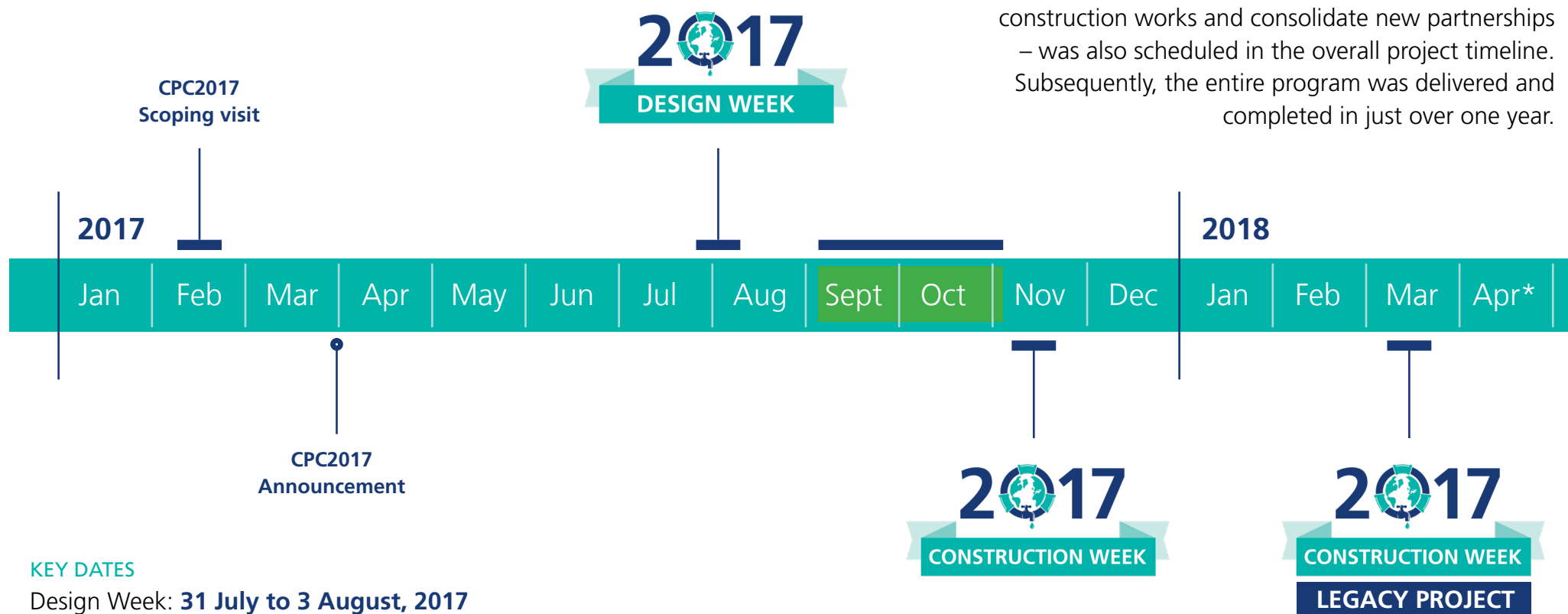
DESIGN

2017

PROGRAM CYCLE AND TIMELINE

Overall schedule for CPC2017

Based on experience and feedback from previous editions, the CPC2017 program was divided into two parts: a **Design Week** and a **Construction Week**. A follow-up **Legacy Project** – intended to complete construction works and consolidate new partnerships – was also scheduled in the overall project timeline. Subsequently, the entire program was delivered and completed in just over one year.



KEY DATES

Design Week: **31 July to 3 August, 2017**

Local Contractor preparatory work at SDN Cicau 02: **September–October, 2017**

Construction Week (Phase 1): **8 to 15 November, 2017**

Legacy Project / Construction Week (Phase 2): **6 to 13 March, 2018**

* Publication of Final Report (this document): **April, 2018**

EVENT AND EXPERIENCE DESIGN

International Team skillset

CPC2017 set out to combine a cross-section of technical skillsets expanding on the educational pathway and career options for vocational apprentices, students and professionals in Indonesia, and around the world. For the first time in the international Community Plumbing Challenge program, CPC2017 presented an **International Team** representing different countries and **working together in collaboration** from the very start. An initial age guideline specifying that participants be under 30 years old was relaxed to incorporate a group of senior, experienced professionals and mentors into the team.

Skillsets recruited were Plumbers, Plumbing Engineers, Architects, Designers, Welders/ Metal Fabricators, Bricklayers, Tilers/Masons, and Carpenters.

IMAGES

017: Plumbers connecting wastewater pipe.

018: Plumbing Engineer calculating water supply.

019: Architect presenting design plans.

020: Welder preparing water tank stand fabrication.



EVENT AND EXPERIENCE DESIGN

International Team support

For all three parts of the CPC2017 program, the International Team were accommodated together at the **Sahid Jaya Hotel** in Lippo Cikarang. This hotel was ideally located approx. 15mins drive from the work site at SDN Cicau 02.

Bed and Breakfast accommodation was available in single or shared twin rooms, with a free laundry service provided: very useful for team members after work in hot and often wet and muddy conditions. Airport transfers were also provided alongside all of the above as part of **International Team Packages**.

Time off for rest and relaxation was included at the halfway point of both Construction Week projects, and excursions to local attractions were organized to ensure the group experienced traditional culture and hospitality during their time on this assignment.

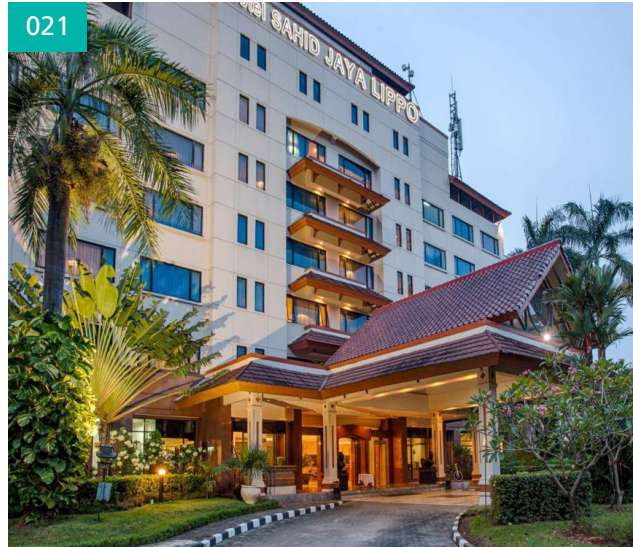
IMAGES

021: Team base: Sahid Jaya Lippo Hotel, Cikarang.

022: A briefing meeting at hotel, Nov 2017.

023: Team excursion to local gardens, Nov 2017.

024: Farewell gathering in hotel lobby, March 2018.



021



022



023



024

EVENT AND EXPERIENCE DESIGN

Local welcome

The CPC2017 organizing team coordinated with management at SDN Cicau 02 to host full school assemblies and **traditional Indonesian cultural ceremonies** on the opening morning of both Design Week and Construction Week.

On these occasions, our International Team was welcomed to the school in a loud and colourful celebration; invited to join with music, dance and other performances from the students and staff in the main school playground. The ceremonies attracted crowds of families and local residents from all over Cicau village, and ensured the projects got underway with a bang!

IMAGES

- 025: First morning of CPC2017 Design Week.
- 026: SDN Cicau 02 Head Teacher Ata Sukarta greets IWSH Managing Director Megan Lehtonen.
- 027: Martial Arts demonstration.
- 028: Traditional Indonesian dance performance.



EVENT AND EXPERIENCE DESIGN

Local logistics

The PT. IAPMO Group Indonesia research lab and testing facility – located only 3km from SDN Cicau 02 – became the **CPC2017 Hub**: base for ongoing meetings, presentations and storage of tools and materials, plus other key offsite work, including metal fabrication and media production.

Local 'Angkor' taxis were employed to transport team members between SDN Cicau 02, the CPC Hub, and the team hotel. These taxis, each of which was typically able to transport 12 people, were also suitable for transporting tools and equipment during the project.

As well as transport and materials, all food supplies, team meals, promotional item production and printing were sourced in the local area: ensuring investment in local businesses at every opportunity.

IMAGES

029: Project Manager Grant Stewart organizing storage at CPC2017 Hub during Construction Week.

030: Design Week meeting in boardroom.

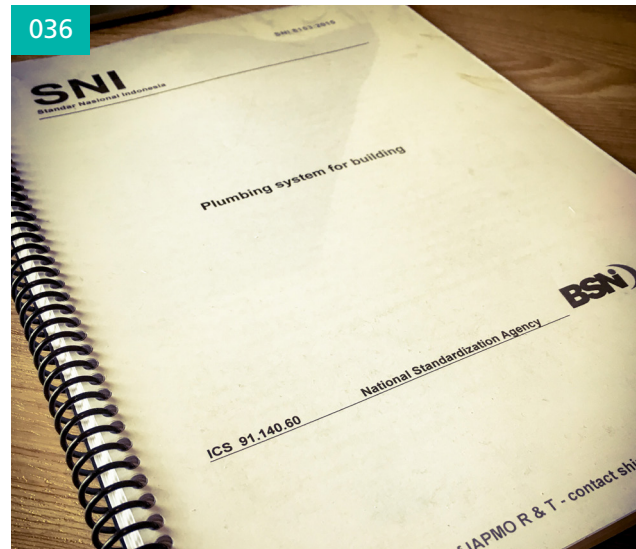
031: Team meal in local restaurant.

032: Travelling local-style, via Angkor taxi.



INDONESIAN PLUMBING STANDARD

Introducing and referencing SNI 8153:2015



The Indonesian National Standard *Plumbing System for Building* has been developed by PT. IAPMO Group Indonesia in collaboration with Badar Standardisasi Nasional (BSN): the national standardization agency of Indonesia.

This standard has been created in order to improve the implementation of plumbing systems in Indonesia, referring to the *Uniform Plumbing Code (UPC®) 2012* and *UPC Study Guide 2012* that are arranged and published by the International Association of Plumbing and Mechanical Officials (IAPMO): widely used by governments and business entities in building and construction projects across the world.

SNI 8153:2015 was utilized and referenced by the International Team during CPC2017 Design Week, informing design-thinking and decision-making for the upgrade and construction of new toilet, handwashing and wastewater facilities at SDN Cicau 02.

IMAGES

- 033: Design Week team consulting SNI 8153:2015.
- 034: UPC® documentation to hand in CPC2017 Hub.
- 035: Implementing standards in final design plans.
- 036: The SNI (Standar Nasional Indonesia) document.

HEALTHABITAT O/S COLLABORATION

Incorporating lessons from Nepal Village Sanitation Program

2017

Further input to the design process was provided by International Team members involved with the work of Australian NGO **Healthabitat** and its overseas ('O/S') arm, which is responsible for ongoing public health and housing-related community development work in the Kathmandu Valley region of Nepal.

In the years leading up to the creation of the Community Plumbing Challenge, and the subsequent formation of IWSH, The IAPMO Group sponsored the participation of plumbers and other construction-focussed tradespeople in Healthabitat O/S (HH O/S) projects. Many parallels could be drawn between previous HH O/S design and construction of toilet, handwashing and wastewater systems for schools in Nepal, with those being proposed for SDN Cicaú 02 via CPC2017.

IMAGES

037: Troppo Architects (Australia) Director and HH O/S collaborator Adrian Welke was present for all three stages of the CPC2017 program.

038: HH O/S team install toilets in Nepalese school, 2016.

039: HH O/S building school toilets in Nepal, 2016.

040: CPC2015 participants join HH O/S in Nepal, 2016.





041: Example of CPC2017 Sponsorship and Partnership marketing material distributed to potential supporters in lead-up to the event.

PLUMBING
DAY 2018

2017



CONSTRUCTION

TOILETS

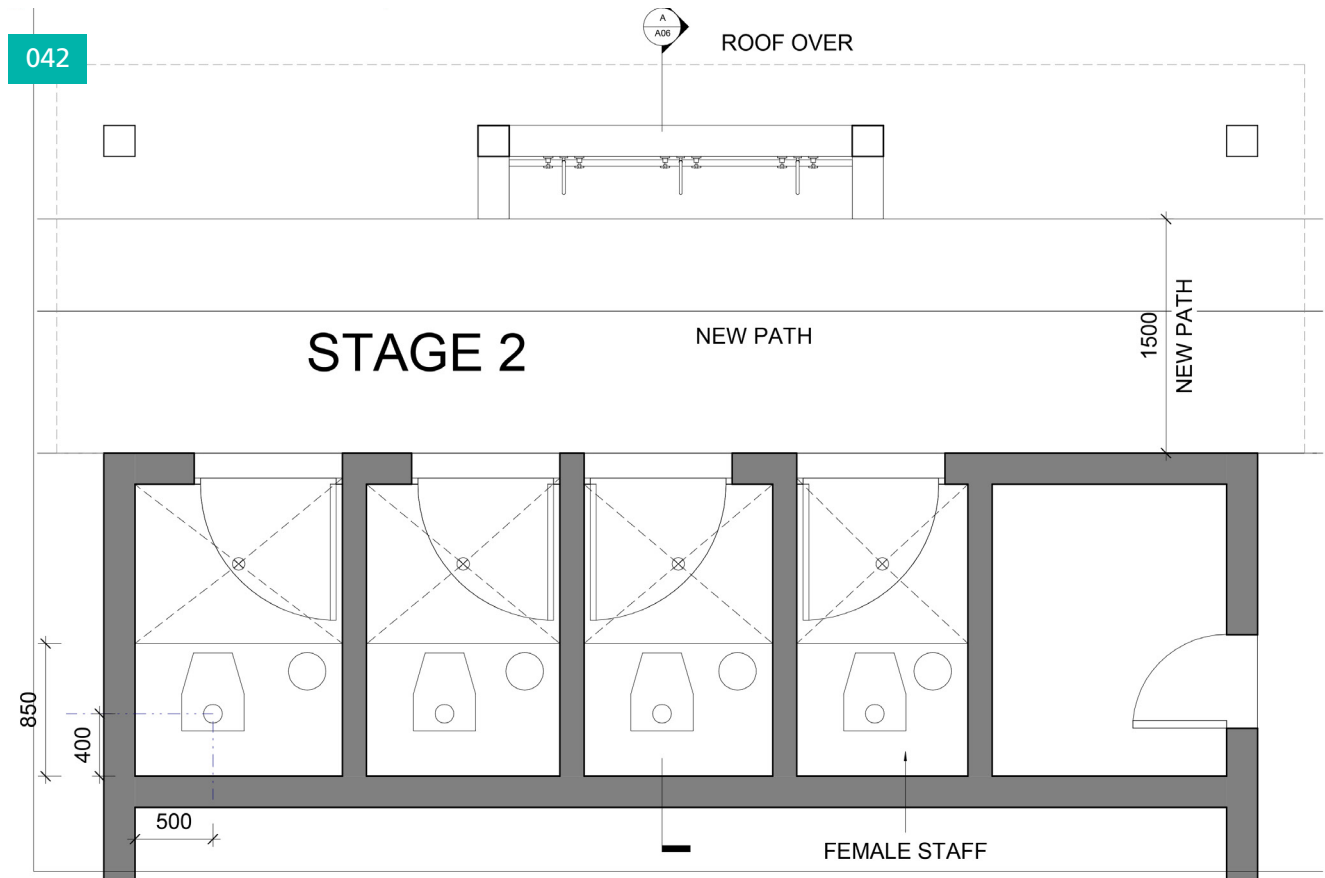
Renovation and expansion of existing facilities

Following Design Week, it was decided that **the number of toilets would be doubled** in each school building: creation of four toilets on each side where two had previously existed, with new walls.

During the design process, the school management committee was consulted to discuss placement of toilets, water points, step height and position. Floor drains were also added to prevent wastewater pooling inside each new toilet area.

These details took into consideration the ages of student users, space available and size of new toilets.

Toilet pans were donated to CPC2017 by PT. Surya Toto Indonesia.



IMAGE

042: Toilets excerpt from Design Week plans.

TOILETS

Installation of new walls, floors and drainage



IMAGES

- 043: Preparation for new toilet wall infill.
- 044: Bricklaying for new partition wall.
- 045: Installation of underground drainage.
- 046: Setting toilet pans, preparing for concrete.
- 047: Pouring new concrete floors.

TOILETS

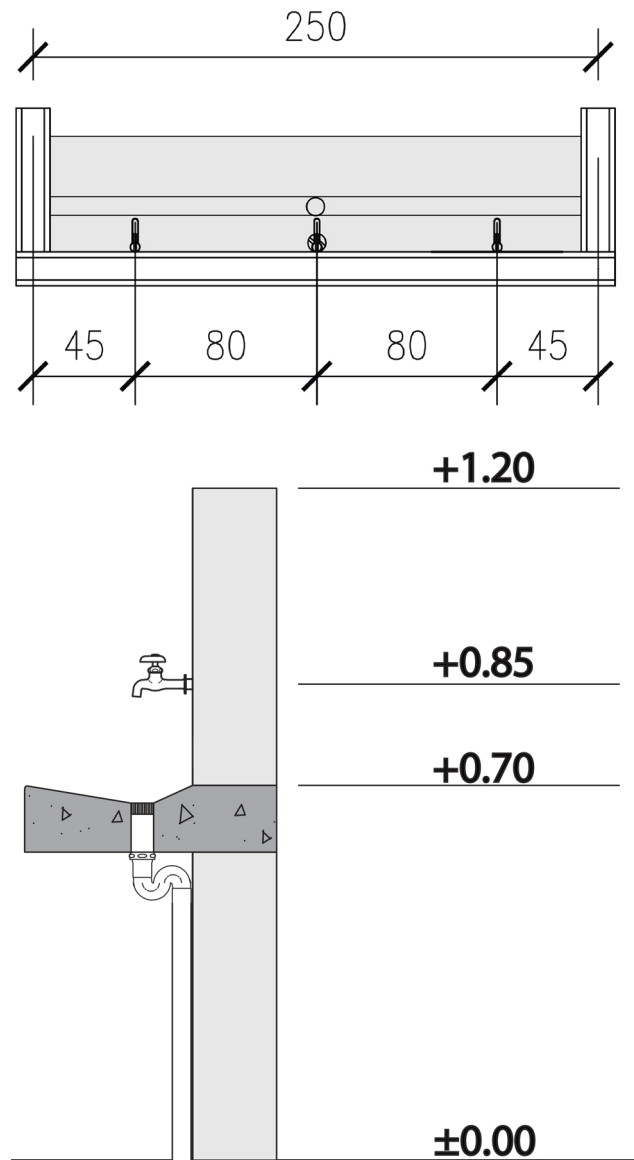
External drainage and internal finishes



IMAGES

- 048: Newly poured concrete floors.
- 049: Installation of external drainage from new toilets.
- 050: Tiling interior walls.
- 051: Tiling floors with fall to new floor drain.
- 052: Completed tiling inside toilets.

053



HANDWASHING

New taps and basins at child height

Two handwashing areas were designed and constructed outside the entrances to new toilets: one for each school building. No handwashing facilities had existed at SDN Cicau 02 prior to this.

The dimensions of these new handwash stations had been previously tested and documented through Healthabitat O/S school toilet design and construction projects in Nepal. The facilities were designed to give three students aged between 5–12 years old the ability to use water points and wash hands standing side-by-side, at the same time and without hinderance.

The new handwashing facilities were built from concrete and brick for durability in the school environment. Accessible waste traps underneath also allow for easy maintenance.

Taps for the new handwashing areas were donated to CPC2017 by PT. Sugih Eka Makmur (SAN-EI).

IMAGES

053: Handwashing excerpt from Design Week plans.

HANDWASHING

Trough construction



054



055



056



057



058

IMAGES

- 054: Discussions on handwashing area construction.
 055: Formwork and concrete preparation.
 056: Pouring concrete for trough.
 057: Building brick piers to support new roof cover.
 058: Student bricking piers and surrounding wall.

HANDWASHING

New stations complete



IMAGES

- 059: Piers completed and brickwork continuing.
- 060: Handwash facility complete and ready for rendering and tiling.
- 061: Donated taps installed.
- 062: Painting and signwriting for area.
- 063: Water connected and area in use.

WASTEWATER

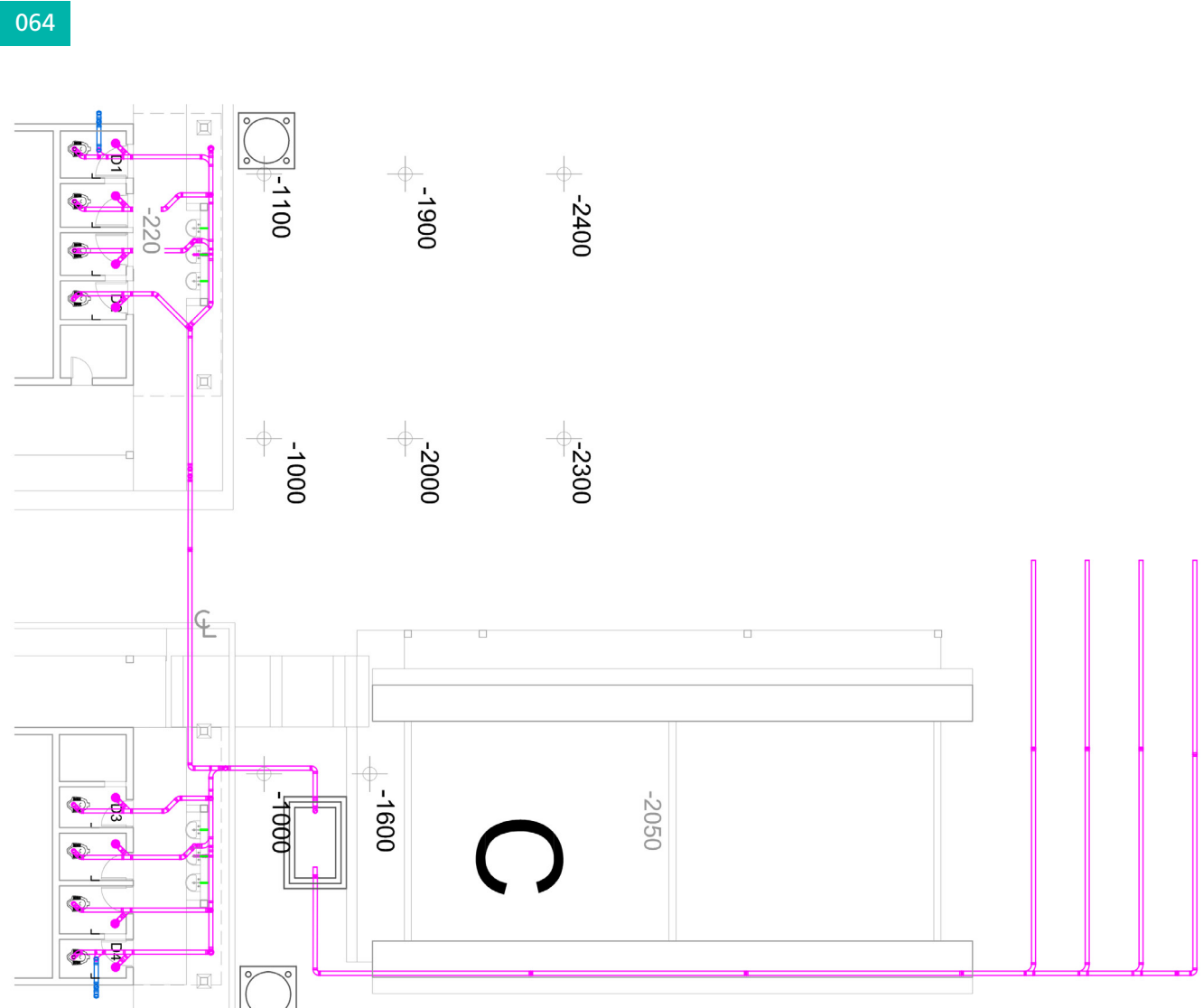
Replacing existing system for safer disposal

Before CPC2017, wastewater at SDN Cicau 02 was disposed of into two septic tanks: one on each side, directly in front of the toilets. After passing through the tanks, the water seeped into the surrounding ground and areas where the schoolchildren would play.

The **new wastewater system design** utilised a new 3000ltr septic tank that would treat wastewater before draining to four new Evapotranspiration Absorption ('ETA') beds. These ETA beds were positioned in an unused area of ground behind the school buildings and at the very edge of the site boundary: the safest area for final treatment, located the furthest possible distance away from any student activity.

IMAGE

064: Wastewater excerpt from Design Week plans.



WASTEWATER

Preparing and installing new system



IMAGES

- 065: Digging trenches for ETA beds.
- 066: Installation of new septic tank.
- 067: Spreading aggregate in ETA beds.
- 068: Drainage from septic tank to ETA beds.
- 069: ETA beds ready for pipe installation.

WASTEWATER

Completing installation

2017



070



071



072



073

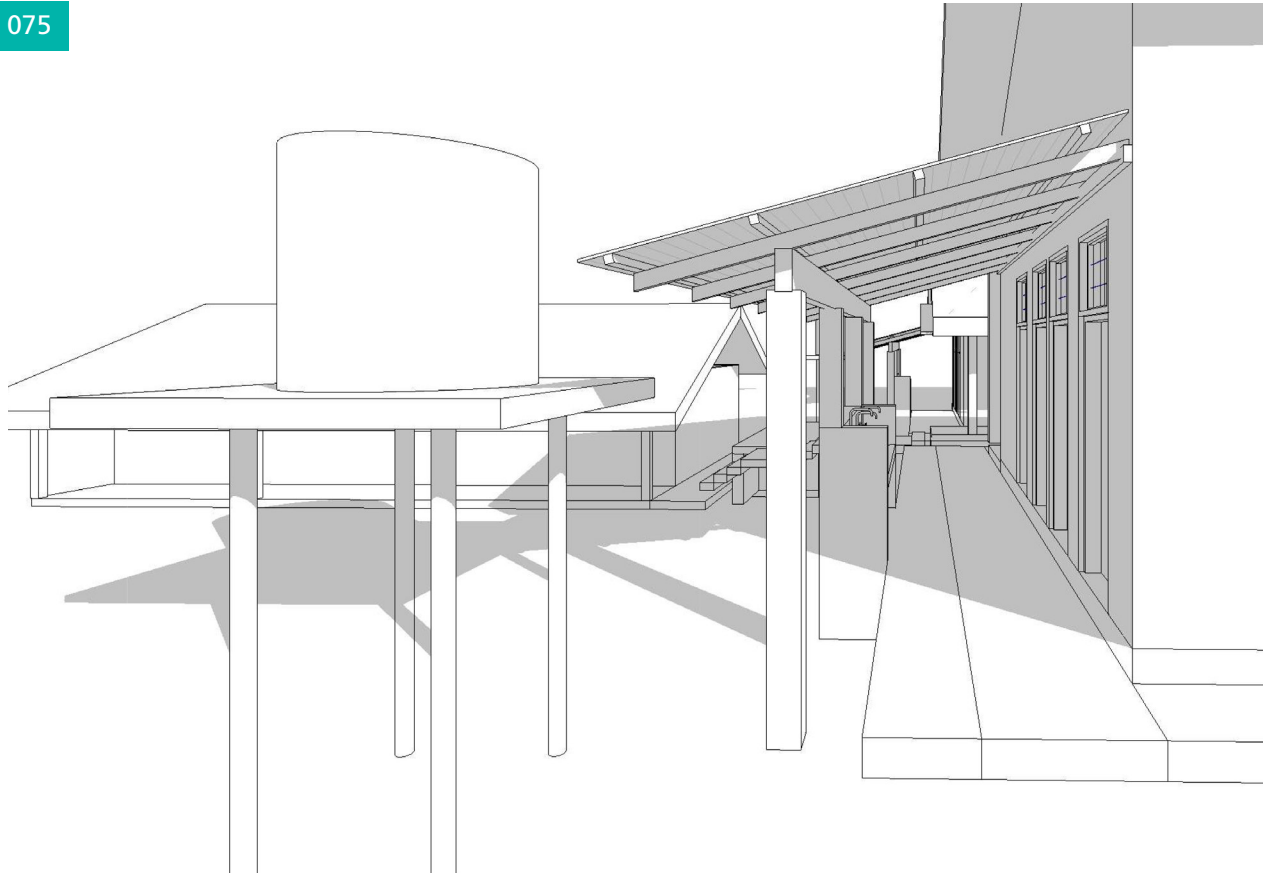


074

IMAGES

- 070: Connecting external drainage from toilets and handwashing area to new septic tank.
- 071: Brickwork of Distribution Box for ETA beds.
- 072: Slotted piping in place and ready for installation of clear-out point.
- 073: Vegetation growing around and on top of working ETA area at back of school grounds.
- 074: Boundary of school grounds at edge of ETA beds, looking toward fields and lake (previously main water supply source for the school).

075



IMAGES

075: Finished renovations model from Design Week drawings.

FURTHER RENOVATION

Additional upgrades and improvements

Before CPC2017, water supply to SDN Cicau 02 was pumped directly from a nearby lake: bordered by a large industrial park complex and further polluted with domestic waste and animal waste.

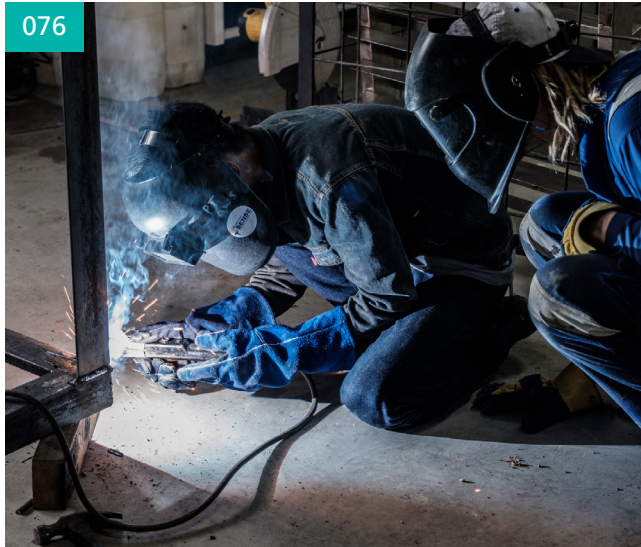
The CPC2017 program ensured the school was **reconnected to municipal water supply**, but this was a limited solution as this supply proved to be available often for only 1–2 hours per day.

In response, the Design Week team calculated requirements for **two new elevated water tanks** to ensure a quality, reliable water supply would become available to the school for two days at a time despite any restrictions of municipal supply.

Other **improvements to the space** around the toilets and handwashing areas included new paving for widened pathways, allowing easier access; new roofing to provide cover during rainy season while also allowing in light; new, lockable doors to improve security; new signage; and better ventilation and air circulation to help the areas stay dry and odour-free.

FURTHER RENOVATION

Increased water supply to site via two elevated 2000ltr tanks



IMAGES

076: Students work on fabrication of tank stands offsite at CPC2017 Hub.

077: Erection of one of the new water tank stands.

078: Using new water supply to test new septic tank.

079: First new water tank in place.

080: Moving second water tank into position.

FURTHER RENOVATION

New roofing, paving, doors and signage plus improved light and ventilation



IMAGES

- 081: New roofing in place: centre section clear sheet polycarbonate to provide additional lighting over toilet doorways and handwashing area.
- 082: New widened pathway, improving access and paving with fall away from building to stop water pooling.
- 083: New signage added to piers and toilet doors: LAKI-LAKI ('boys') and PEREMPUAN ('girls').
- 084: New timber doors, lockable, locally made high-quality.
- 085: Improved ventilation for toilets.

2017

EDUCATION

CLASSROOM AND PLAYGROUND ACTIVITIES

Engaging schoolchildren in Plumbing, Design and Construction learning

2017

All International Team members were asked to arrive at CPC2017 with an idea for a **game or activity** to present to the students of SDN Cicau 02. This was another important step in building rapport and friendship with the school community, but more importantly, it was a unique opportunity to explain and demonstrate aspects of vocational skills and trades to the young children.

Team members were asked to prepare a lesson plan for review on arrival, and activities were subsequently planned and scheduled by the full group. Each lesson was typically presented by two international participants alongside two Indonesian students (also supporting as interpreters).

For many of the International Team, this was the first time they had stood up in front of a classroom and presented to schoolchildren.

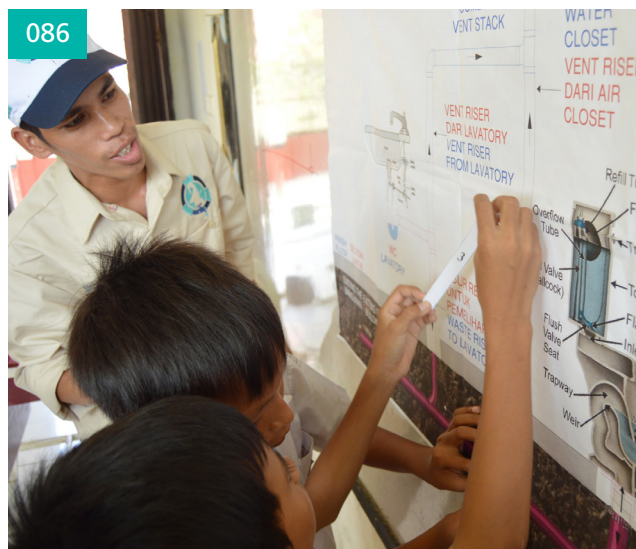
IMAGES

086: An introduction to Plumbing Design.

087: Siting an imaginary washroom in school grounds.

088: Germ Limbo! A fun game for the younger kids illustrating importance of handwashing.

089: Team members become teachers.



PUBLIC HEALTH AWARENESS

Health checks and handwashing in Cicau village



In what was a huge step for the public health impact goals of the overall Community Plumbing Challenge program, CPC2017 partnered with the **District Health Clinic of Sukamahi, Central Cikarang** to present a pop-up clinic outside Kantor Kepala Desa Cicau – Cicau village head office – for three hours between 9am and midday on Saturday 12 November, 2017. **Free health screening** was provided by a team of three doctors, and free prescriptions were given out to 65 local residents by the supporting clinic staff.

Beside the clinic space our team presented a **handwashing demonstration area**, surrounded by World Health Organisation visuals depicting correct handwashing procedure, and further information – for the visiting public – on the CPC2017 program taking place at SDN Cicau 02.

IMAGES

090: Schoolchildren from SDN Cicau 01 visit the public handwashing demonstration.

091: Local residents avail of free health screening.

092: Dr Yuke Rishna Aryani, Head of District Clinic.

093: A total of 65 free prescriptions were issued.



SYSTEM MAINTENANCE TRAINING

Preparing local partners for future upkeep

2017

School staff, caretakers and local contractors were **presented with an overview of the new plumbing system** being installed at the school, then demonstrated the correct method and tools required to carry out routine maintenance and/or any necessary repairs in future.

These sessions were commenced in the middle of Construction Week, and continued through to the end of the Legacy Project in early 2018.

A further maintenance folder, providing reference visuals and diagrams, was created during the Legacy Project and handed over to the school on completion of the work.

IMAGES

- 094: International Team members address group.
- 095: SDN Cicau 02 staff attend maintenance meeting.
- 096: Discussing final plumbing system design with local contractor and school headmaster.
- 097: Team reviewing documentation with headmaster.



INTRODUCING PLUMBING STANDARDS

Further demonstration to industry and education representatives



A workshop presenting the new **Indonesian Plumbing Systems Standard (SNI 8153:2015)** and general overview of the importance of standards development was attended by a group of eleven plumbing industry and vocational education representatives from the surrounding Jakarta/Bekasi region.

This workshop was developed in advance in consultation with IAPMO Group staff, and was run by senior CPC2017 International Team members/mentors Greg Tink (Australia; representing the Plumbing Industry Climate Action Centre, Victoria) and Randy Lorge (U.S.; from Fox Valley Technical College and representing the American Society of Plumbing Engineers and United Association Local 400, Wisconsin).



IMAGES

098: Randy Lorge presents to group at CPC2017 Hub.

099: PT. IAPMO Group Indonesia Engineer Anwar Solihin explaining lab equipment.

100: Explaining testing facilities.

101: The workshop group onsite at SDN Cicau 02.

HANDWASHING DEMONSTRATIONS

Schoolchildren get hands-on with new facilities

Following construction of the first handwashing area during Construction Week, it was evident that **further demonstrations with schoolchildren and staff** were required to reinforce their understanding of correct usage, particularly in conserving water.

To symbolise further ownership of the new facilities, during the Legacy Project the school children were invited to place their handprints on the front of the handwashing area beneath the slogan *Mencuci Tangan, Bersih Lebih Baik* – ‘Wash Hands, Better Hygiene’. Not only did this activity result in a uniquely colourful and personal **new art installation for the school**, but it also required all participants to wash their paint-covered hands afterwards!

IMAGES

102: Schoolchildrens' handprints to represent ownership.

103: A unique wall mural was created.

104: Washing after adding handprints to mural.

105: International Team members adding their marks.



International Poster competition submissions inspired by live project works



A further classroom activity was organized to mark **World Plumbing Day** (11 March) and join the International Poster competition organized each year by the World Plumbing Council, which encourages children under the age of 10 – all over the world – to put pens, pencils and crayons to paper to depict their ideas about water, health, plumbing and the environment.

After a short introductory presentation from the Indonesian team members, children across three grades spent their morning designing posters and creating artwork in response to the presence of the CPC2017 program at their school. This was backed up by further demonstrations of the new handwashing facilities and correct handwashing steps.

Winning poster designs were picked from each class (five in total), and entered into the international competition.

IMAGES

- 106: Students get to work on their poster designs.
- 107: Indonesian team members lead these classes.
- 108: Further handwashing demonstrations included.
- 109: Winning artists presented with certificates.



2017

LEGACY

APIN FORMATION

New Indonesian Plumbing Industry association established



Asosiasi Plambing Indonesia (APIN)

was established on the last day of CPC2017 Construction Week: an association of Indonesian plumbing industry stakeholders pledging to work together to develop and improve this sector in the country.

Founding members of the new association include PT. IAPMO Group Indonesia, PT. Wahana Duta Jaya Rucika, PT Kohler Indonesia, PT. Surya Toto Indonesia, PT. Pralon Indonesia, PT. Duravit Indonesia, PT. Roto Rooter Indonesia, PT. Bintang Sejati Prima (Fluidmaster), PT. Sugih Eka Makmur (SAN-EI), and PT. Tri Sinar Purnama.

Developing the Community Plumbing Challenge model was presented as a potential collaborative venture for the new APIN group, and has continued to be explored post-event.

IMAGES

- 110: Indonesian Plumbing Industry representatives sign commemorative APIN banner.
- 111: Press conference at CPC2017 Hub on final day of CPC2017 Construction Week.
- 112: Representatives of IWSH, BSN Indonesia and PT. IAPMO Group Indonesia at press conference.
- 113: Site visit to SDN Cicau 02 for APIN group.



REGIONAL GOVERNMENT ENDORSEMENT

Pledging support for further development of Community Plumbing Challenge initiative



On several occasions during the CPC2017 program, work at SDN Cicau 02 was visited by representatives of Pemerintah Kabupaten Bekasi, Badan Perencanaan Pembangunan Daerah (**Government of Bekasi Regency, Regional Development Planning Agency**). Members of the CPC2017 organizing team were also invited for follow-up meetings at the local government offices.

The project was presented with a **Corporate Social Responsibility (CSR) award** by Bappeda Mohamad Irsan Frimansah, and a letter of further endorsement was provided to our organizing team with a view toward engaging other partners in the Bekasi region to develop new CSR initiatives following the CPC2017 model.



IMAGES

- 114: Bappeda Mohamad Irsan Frimansah (centre) with representatives of District Education Department.
- 115: The Bappeda adds to our handwashing mural.
- 116: Presentation of CSR award.
- 117: Additional site visit from Bappeda staff.

CORPORATE SOCIAL RESPONSIBILITY

Opportunity for program development in Indonesia

The formation of the new APIN group – combined with the endorsement of CPC2017 by the Government of Bekasi Regency – has opened the door for further initiatives to develop in the coming years, consolidating the new partnerships established by CPC2017.

APIN founding member PT. Wahana Duta Jaya Rucika were the first to demonstrate the value of CPC2017 to their own CSR programs on the final day of CPC2017 Construction Week, by presenting SDN Cicau 02 with an official plaque representing their donation of Rucika Wavin pipe to supply the overall project.

Follow-up meetings have indicated that **industry CSR offers strong potential for further collaboration post-CPC2017.**

IMAGES

- 118: SDN Cicau 02 Headmaster Ata Sukarta (right) is presented with a Corporate Social Responsibility plaque from PT. Wahana Duta Jaya Rucika.
- 119: APIN group partners onsite at SDN Cicau 02.
- 120: APIN group partners were invited to inspect works on the final day of CPC2017 Construction Week.
- 121: Legacy Project meeting between APIN group partners and CPC2017 organizing team.



122

SUSTAINABLE DEVELOPMENT GOALS



In January 2016, the 17 **Sustainable Development Goals (SDGs)** of the 2030 Agenda for Sustainable Development — adopted by world leaders in September 2015 at an historic UN Summit — officially came into force. They are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.

The CPC2017 organizing team made a conscious and deliberate effort to reference the new UN SDGs relating to Water and Sanitation (**Goal 6**) and Health (**Goal 3**); demonstrating these goals in action through collaborative design and construction skills, with the simple but focussed aim of stopping people getting sick. The Global Goals will continue to be an important reference for future development of Community Plumbing Challenge initiatives in Indonesia.

123



124



IMAGES

- 122: The UN SDGs: a Sustainable Development Agenda to 2030, and universal call to action.
- 123: CPC2017 Legacy Project team promoting SDGs.
- 124: Sharing stories about the ongoing work of CPC2016 partners WASSUP Diepsloot (South Africa) to team and industry representatives during CPC2017.

2017

MEDIA

COMMUNITY RELATIONS

Local outreach and networking

From the very start (site selection visits in February 2017) it was critical that the CPC2017 organizing team developed clear and respectful dialogue with local community leaders and representatives, in order to build trust and understanding to ensure smooth delivery of the program for all involved.

As well as school management, our organizing team worked closely with the **Cicau village head office** and **local police** to prepare the program to be hosted at SDN Cicau 02.

As a result, the atmosphere of welcome and acceptance that was created meant that team members could walk around Cicau village at ease, engaging with local residents, shop-keepers and stall holders in the streets around the school: greatly enhancing their experience of this community and its people.

IMAGES

- 125: Hj. Juriah of Cicau village head office addresses CPC2017 International Team at Public Health Showcase event during Construction Week.
- 126: Team outside Cicau Village head office.
- 127: Team members mingling with local residents.
- 128: Organizing team updating local police.





129



131



130



132

PUBLIC RELATIONS

Press coverage in Indonesian media

CPC2017 engaged the professional services of the Jakarta-based PR Agency, **PT. Bright Brilliant Communication (Bright IMC)** during Construction Week: support that included press photography, copywriting, translation, and national media distribution.

The Bright IMC team crafted a series of press releases that highlighted the program's focus on skills education, public health, and improving sanitary conditions in the host school community setting.

Over the course of Construction Week, there were **35 CPC2017 features published across Indonesian media**: 32 online articles, plus two TV features and one radio feature. This strong leaning toward online news platforms allowed for easy content sharing via existing Community Plumbing Challenge social media.

IMAGES

129: Bright IMC team onsite at SDN Cicau 02.

130: *IAPMO and IWSH collaborate for Community Plumbing Challenge*: published by BeritaSatu, story tweeted to 497k followers.

131: Interviewing International Team participants.

132: *IWSH provides free care*: published by Liputan6 News, story tweeted to 3.3M followers.

PHOTOGRAPHY AND FILM

Project highlights captured to create online archive and resource

2017

As with previous Community Plumbing Challenge events in India and South Africa, CPC2017 was supported once again by staff and students from the Art, Design, Media & Technology Department of the **School of Science and Technology Singapore**: a collaboration that dates back to the pilot Water Innovation Challenge event at Singapore International Water Week, 2014.

Feature length highlights videos were published on YouTube at the end of Design Week and Construction Week, available in English and Bahasa Indonesian spoken-language versions, with subtitles in both languages. Further bespoke promotional videos were also provided to CPC2017 Platinum sponsors.

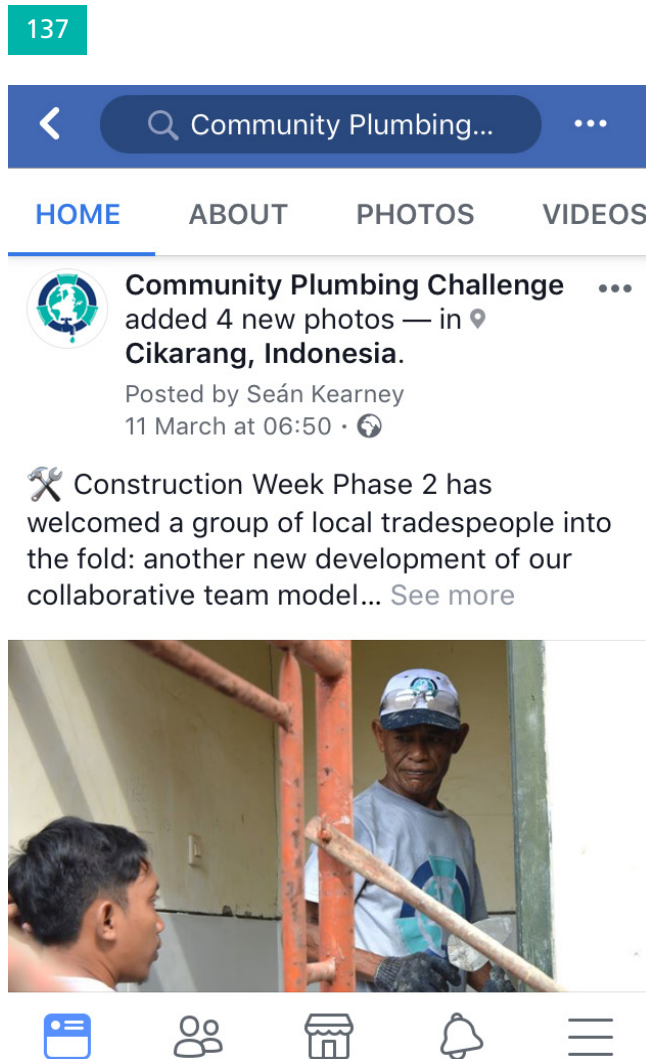
All CPC2017 film and photography has been archived and sponsors may download for free.

IMAGES

- 133: SST Media Team Director Ng Seen Leng Patricia (left) interviews Indonesian students during drive to site.
- 134: Filming (and lighting) work inside school toilets.
- 135: Flying drone camera for aerial footage.
- 136: Capturing unique, behind-the-scenes viewpoints.



#CommPlumbing continues reach and growth



News and updates throughout CPC2017 were shared via the Community Plumbing Challenge accounts on [Facebook](#) and [Twitter](#). During each of the projects, daily highlight photo albums were added and a regular stream of updates were posted throughout each day, including regular posts in Bahasa Indonesian. At the conclusion of Construction Week, [the Highest Weekly Total Impressions for CPC2017 Facebook posts was 122,372.](#)

Boosted Facebook posts were provided for highlights videos and messages from Platinum sponsors. The most successful of these posts was a World Plumbing Council promotion which received over 6.3k Likes.

The hashtag [#CommPlumbing](#) continued to be used as an effective link across content posted to all online social media platforms, whether included in posts from the official channels or added to posts from sponsors, partners, team participants or the general public.

IMAGES

137: Example of ongoing Facebook updates.

138: Example of tweets @CommPlumbing.

2017



CREDITS

Marilah hemat air dan
jaga kebet sihan

WORLD PLUMBING DAY 2018/18

INTERNATIONAL TEAM

Community Plumbing Challenge 2017



The CPC2017 International Team comprised participants from Indonesia, Australia, India, Singapore and the United States, with a total of 46 individuals that participated across the three parts of CPC2017 program. 17 of these people were involved in more than one part.

- Design Week: 31 July to 3 Aug, 2017
- Construction Week: 9 to 15 Nov, 2017
- Legacy Project: 6 to 13 March, 2018

IMAGES

- 139: CPC2017 Design Week International Team.
140: CPC2017 Construction Week International Team.
141: CPC2017 Legacy Project International Team.



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Environmental Engineer (Indonesia)

Matthew Geldard-Ker ●●

University of Western Australia

Matthew Lee O'Brien ●●

PICAC / Swinburne University (Australia)

Melynda Kensey ●

Healthabitat O/S (Australia)

Mitchell Fisch ●

Welder/Fabricator (Australia)

Mohamad Taufiq bin Mohamad Rozaini ●

SST (Singapore)

Muhammad Fauzi Mustaqim Akkas ●

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SST (Singapore)

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ASPE (USA)

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INTERNATIONAL TEAM

Community Plumbing Challenge 2017

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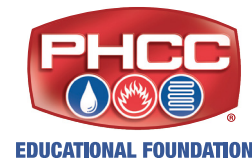
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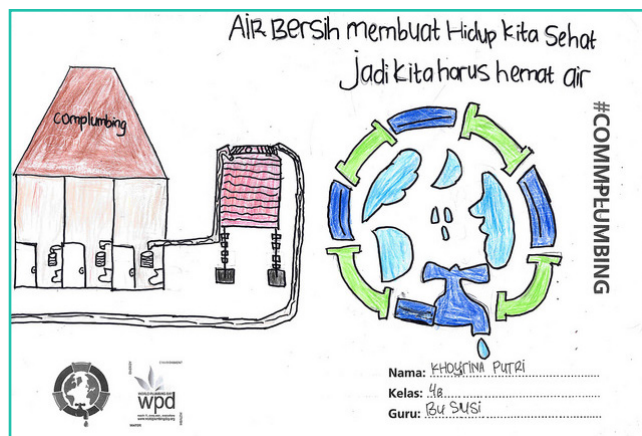
Community Plumbing Challenge 2017

2017

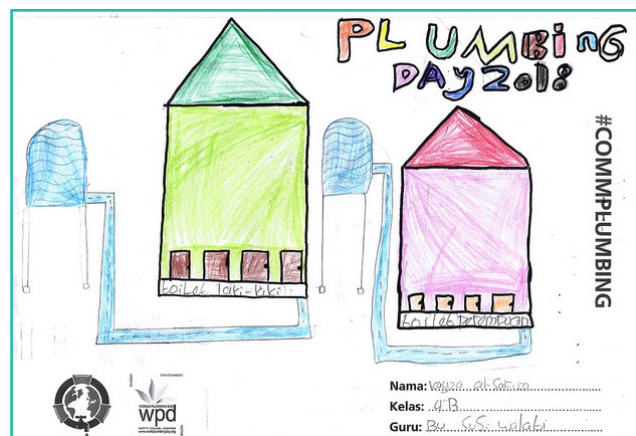
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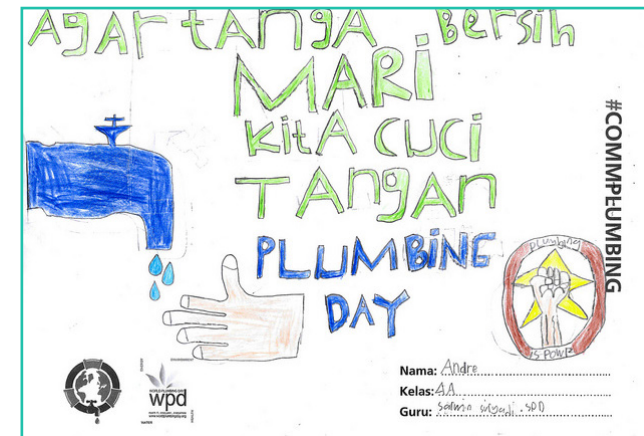
Artwork from the children of SDN Cicau 02 featured in this report (details, Page 35)



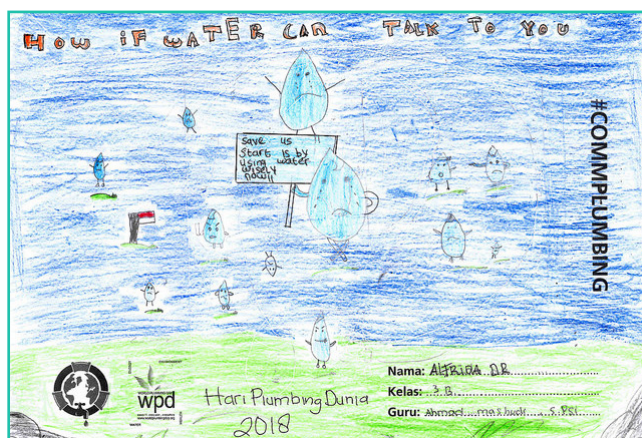
Page 7: Khoyrina Putri (Class 4B)
"Clean water makes our lives healthy."



Page 16: Kayza Al-Sakim (Class 4B)
"Mens and Womens Toilets"



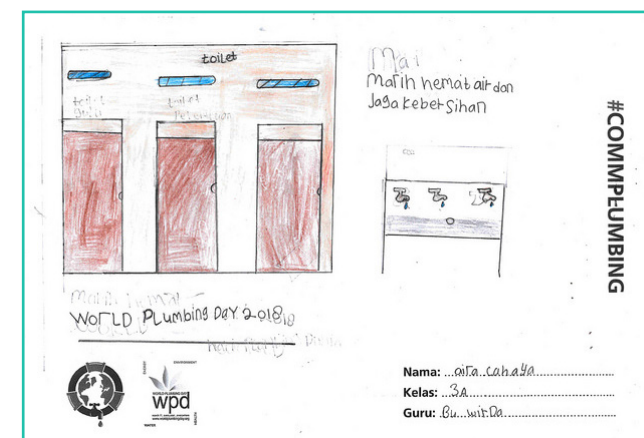
Page 29: Andre (Class 4A)
"We need to wash our hands to keep clean."



Page 36: Alfrida Dr (Class 3B)
"If water could talk to you?" [it would say...]



Page 41: Muhammad Raihan Alfahresa (Class 3B)
"Let's save water."



Page 46: Aira Cahaya (Class 3A)
"Let's save water and keep clean."

OTHER THANKS

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The logo for IWSH.org, featuring the text "IWSH.org" in white on a blue rectangular background.

CPC2017 was an initiative of **The International Water, Sanitation and Hygiene Foundation**

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