

Community Development Program 2017



ANNUAL REPORT

PT Terralog Teknologi Indonesia



PT Terralog Teknologi Indonesia

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Front cover photo:
Elementary students at Darunnajah school participate in daily hand washing and dental hygiene.
Duri, Indonesia

Back cover photo:
Students at Madani school work on their English lesson plan.
Parakan Salak, Indonesia



PT TTI Office Manager Puspa Sari Dewi and Business Development Manager Kabul Kurniadi visit the chicken ranch at Darunnajah school.



Dentist Armen Sosialisa Sihotang checks the dental condition of an elementary student, prior to conducting treatment.

Terralog Technologies Inc.

Company Profile

Terralog Technologies Inc.™ (TTI™) is an international services company headquartered in Calgary, Canada. Terralog specializes in CleanTech Geomechanics and deep well disposal waste management using the Slurry Fracture Injection™ (SFI) technology.

The SFI process is an 'Environmentally Sustainable hydraulic fracturing (HF)' technology.

The SFI process has multiple applications, including environmentally sustainable deep well disposal and unconventional petroleum resource development. There are significant environmental advantages associated with using the SFI process in these applications.

TTI's services are built on extensive experience in geomechanics, geology, fracture mechanics, and environmental management with practical field experience.

Terralog is active in Canada, Kuwait, USA and China.

In Indonesia, PT Terralog Teknologi Indonesia (PT TTI) uses the Slurry Fracture Injection™ (SFI™) process to operate one of the largest deep well disposal projects for exploration and production (E&P) waste streams in the world. The SFI project is located at the Duri oilfield in the Riau province of Sumatra, Indonesia. Operations began at the Duri site in December 2002, and ended in June 2017.

From December 2002 to June 2017, approximately 1.62 million cubic meters (10.2 million barrels) of oily viscous fluid waste (oily sludge) has been injected back into deep geological formations, essentially returning the waste stream to its place of origin.



PT TTI President Director Roman Bilak (left) and contractor Alexander Kasbo participate in an industry conference.

Manama, Bahrain

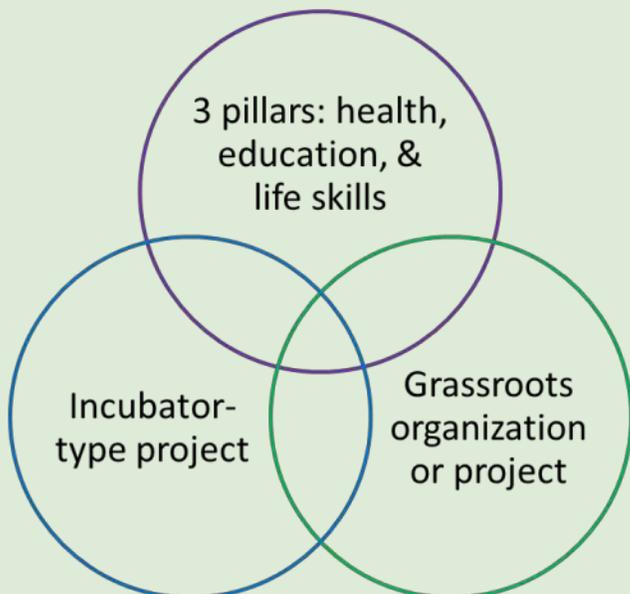
Community Development Program

PT Terralog Teknologi Indonesia (PT TTI) invests a portion of its earnings into the Community Development Program (CDP). This program focuses on supporting projects that directly improve quality of life for women and children in the areas of education, health, and life skills development. CDP support is viewed as an investment in the future.

PT Terralog Teknologi Indonesia Program Criteria

PT Terralog Teknologi Indonesia (PT TTI) continues to develop its Community Development Program (CDP) by pursuing projects of specific need that satisfy the following criteria:

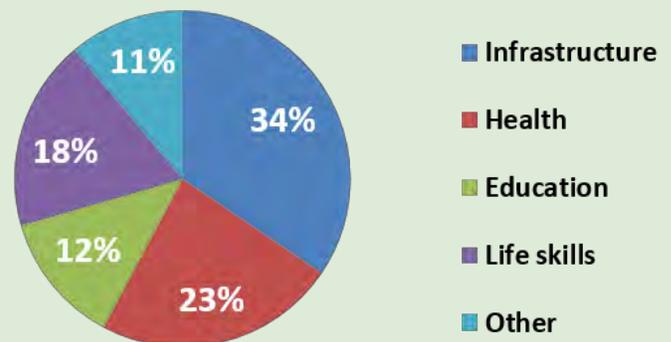
- ✓ Improves women and children’s health, education, and life skills;
- ✓ Grassroots in nature—often volunteer-run organizations, with little or no funding received from governments, foundations, or corporations;
- ✓ Incubator-type projects—CDP funding is key to the project starting or continuing, and there must be potential to grow the project to the point where it can attract additional funding from other sources.



Budgets and Funding

In 2017, PT TTI dedicated 1.25% of its gross revenue (from the previous year) to fund the Community Development Program.

Allocation of PT TTI CDP budget in 2017



Project Categories

Ongoing Projects

- Community Development Program (CDP) funding is meant to focus on a specific need. The CDP is seen as incubator funding, whereby PT TTI supports organizations or projects to a point that they can attract funding from other sources. Every year the CDP’s ongoing projects are evaluated to ensure they continue to meet PT TTI’s CDP criteria.

Special Projects and Disaster Relief Support

- The CDP includes a fund for ‘special projects’ to address situations of urgent need or where basic needs at facilities for women and children are not being met.
- ✓ Special projects are one-time donations that meet an urgent need, on an emergency basis.
- Disaster relief funding is also available to support emergency relief efforts in Southeast Asia as required.

Community Development Program

Projects Overview: 2017

Most of the CDP contributions are made in Duri, Riau (Sumatra), which is the location of PT TTI's field operations.

In 2017, PT TTI's Community Development Program included the following projects in Duri:

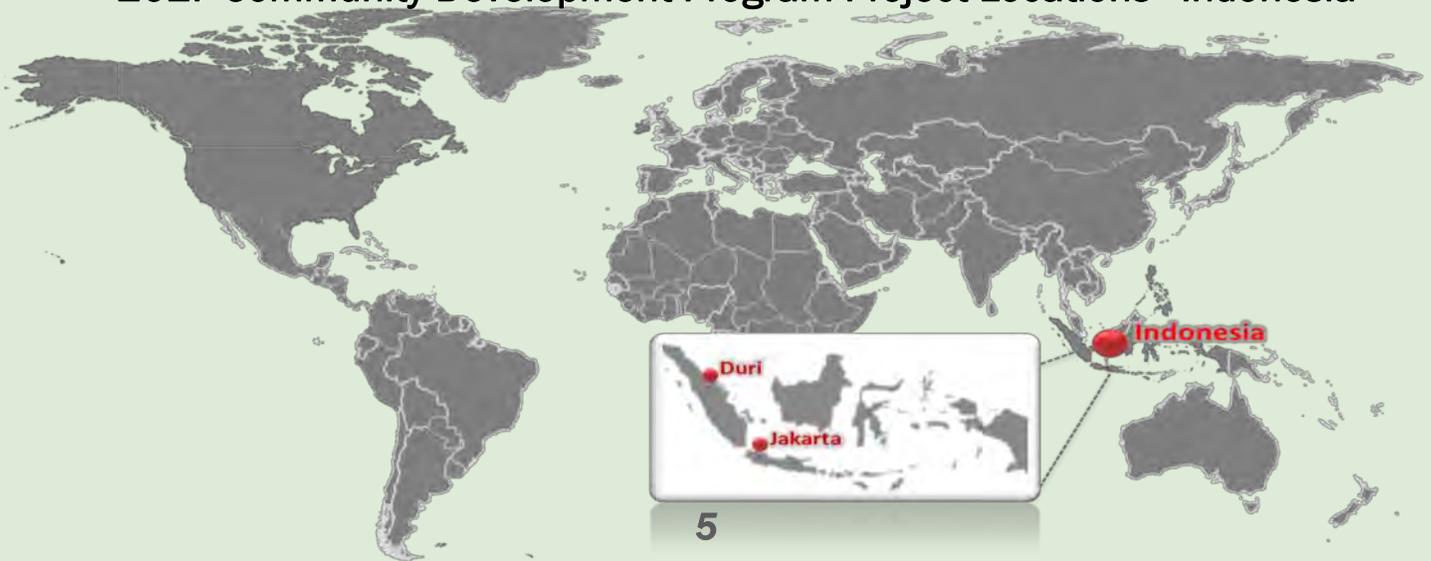
- Supporting food security and life skills at two junior high boarding schools through chicken ranching;
- Supplying a junior high school with the materials and nutrients to conduct vegetable farming for additional income;
- Conducting dental education and treatment for 59 elementary students;
- Teaching 75 English classes to 59 junior high students;
- Conducting small maintenance and repair work at schools;
- Donating four computers for students to learn computer and information technology skills;
- Providing a school with the materials, training and education to operate and maintain a fish pond, for student's consumption and to sell for school revenue;
- Refreshing a school classroom by purchasing 60 chairs and repairing 60 desks;
- Planting 40 trees in two different schools;
- Providing 10 women with the supplies to plant, harvest and sell vegetables for income;
- Providing free health and dental check ups and treatment to over 800 people in two remote villages;
- Conducting workshops on chicken ranching, fish farming, and a life skills class (handicrafts) for girls.



Elementary students at Darunnajah show off their smiles, as part of the dental education and treatment program.

PT TTI also supported an elementary and junior high school in West Java by: paying three teacher's salaries, teaching English classes to students, purchasing furniture for the administration office, installing a new and safer playground, and donating almost 6,900 biscuits and milk to preschool (PAUD) students.

2017 Community Development Program Project Locations—Indonesia



Darunnajah School

Duri, Indonesia

Project: Food security (chicken ranch and vegetable farm)

CDP involvement since: 2015

Project Description:

In 2017, PT TTI's CDP constructed a chicken cage (8 x 8 m²) to accommodate 1000 chickens for a chicken ranch at Darunnajah school. PT TTI provided the school with chicken feed and enough day-old chicks to harvest twice a year. The school harvested 1 tonne of chicken, of which 16% was consumed by students. The school made USD 1130 in income from the chicken harvest, which was used to support their operating expenses.

The school was also given a fence, farming equipment and nutrients for a one hectare cassava farm. They harvested 11 tonnes of cassava, for a total of approximately USD 820.

Darunnajah School is a boarding school for 300 students, and a home for 120 orphans. This school has elementary, junior and senior high school students. Students receive funding to attend school from private donors and the government. However, the school still requires additional donors to help cover its operating expenses.



***Darunnajah chicken ranch—
chickens are 10 days old.***



Darunnajah students work on their cassava farm.



Pak Kabul holds up a chicken from the ranch.

Dental Education and Treatment

Duri, Indonesia

Project: Dental education and treatment for elementary students

CDP involvement since: 2015

Project Description:

The Dental Education and Treatment project is designed in cooperation with local dentist Pak Armen Sosialisa Sihotang. This program provides elementary students at Darunnajah school with the opportunity to practice good hand and dental hygiene by hand washing and brushing their teeth every morning at the school before classes start. Teachers supervise the daily hygiene, and Pak Armen visits with the students and teachers once a month to provide continual education about dental health.

Twice a year, students receive oral hygiene materials and dental treatment from a dentist. In 2017, 68 students benefitted from this program, receiving a combined total of 71 treatments. In addition, Dr. Chairiah (General Practitioner) visited Darunnajah to provide students and teachers with medical education about diphtheria.



Students receive new dental supplies twice a year.



Elementary school students brush their teeth in the morning before classes start.



Dentist Pak Armen provides dental treatment to second grade student Nabila Naila Putri.

English Language Training

Duri, Indonesia

Project: English training for students

CDP involvement since: 2013

Project description:

In 2017, PT TTI's CDP continued a program for teaching English to students at Darunnajah School, and added a new partner, At t'anim orphanage. At t'anim orphanage is located two km from Duri, and accommodates approximately 20 orphans, ages six to 16.

PT TTI CDP Coordinator Ahmad Sakti Alhamidi Hasibuan (Sakti), an English teacher by background, taught classes twice a week to 59 students at both Darunnajah and At t'anim. In Indonesia, students receive English training in schools. However, the curriculum includes grammar only, thereby making it difficult for students to speak English. PT TTI's English training program focuses on spoken English and vocabulary. All students write at least one mid-term exam and a final exam.

Students at both Darunnajah and At t'anim received an average score of 77% on their examinations in 2017.



Darunnajah student Debby Yannur reads an English poem to her classmates.



Students at At t'anim orphanage benefit from the English training they receive from Sakti.



Sakti teaches students at Darunnajah school.

Maintenance Program

Duri, Indonesia

Project: Maintenance and repair work

CDP Involvement since: 2004

Project Description:

The maintenance program was one of the first CDP projects at PT TTI. In this project, PT TTI's CDP provides a full time handyman and materials to support small maintenance and repair work for the local Duri CDP partners.

In 2017, maintenance work was conducted at Muhammadiyah, Darunnajah, and Nur Ikhlas schools. The work included such things as:

- *Fixing unsafe kitchen and bathroom foundations*
- *Installing doors and windows*
- *Building desks for kindergarten students*
- *Constructing a terrace for a school security post*
- *Replacing a broken fence at a girls dormitory*
- *Repainting a playground for elementary students*
- *Providing glass doors for a high school's multifunction room*

Due to the handyman leaving PT TTI, and the CDP partners no longer requiring full time maintenance work, the maintenance project will be discontinued in 2018. PT TTI will re-evaluate this program in the future.



60 desks were repaired for Nur Ikhlas junior high school.



Fixing the bathroom foundation at Muhammadiyah boys dormitory.



**Repairs made to an unsafe kitchen foundation at Muhammadiyah school.
(Left—Before; Right—After)**

Modern Islamic Education of Madani School (Madani)

Sindang Lengok village, Parakan Salak (West Java), Indonesia

Project: Supporting children's education

CDP involvement since: 2013

Project Description:

PT TTI's Director Pak Muhammad Hafni and his wife, Ibu Hestyani Hassan, founded Modern Islamic Education of Madani School (Madani). Together, they support the majority of the school's fees, including the student's books and uniforms. PT TTI's CDP has proudly supported Madani school since 2013.

In 2017, PT TTI's donation consisted of:

- *Providing milk and biscuits to 38 preschool (PAUD) students, three times per week;*
- *Supporting the salary of three teachers;*
- *Purchasing and installing a new, safer playground;*
- *Furnishing the school's administration office with new chairs;*
- *Teaching three English sessions to students and one session to teachers.*

Modern Islamic Education of Madani School (Madani) provides three classes in the village of Sindang Lengok, Parakan Salak:



1. Kindergarten
2. Junior High School
3. Informal Islamic Elementary School (afternoons only).

The school has 171 students and 22 teachers. In 2017, it opened the junior high school and also received government accreditation.



Students receive their weekly milk and biscuits.



The new, safer playground at Madani school.



Students engage in English language conversation.

PT Terralog Teknologi Indonesia

Muhammadiyah School

Duri, Indonesia

Project: Chicken ranching, computer donation

CDP involvement since: 2009

Project Description:

In 2017, PT TTI CDP continued to support a chicken ranching project at Muhammadiyah school. This aims to provide additional protein for the students, as well as income for the school to cover operating costs. PT TTI's CDP provided the project with 1000 day-old chicks throughout the year.

The school harvested close to one tonne of chicken, of which 20% was consumed by students. The school made USD 1180 in income from the chicken harvest, which was used to support their operating expenses.

In addition to the chicken ranching project, PT TTI also donated four computer desktops for computer classes, which are now taught to junior and high school students twice a week.



Muhammadiyah School is an Islamic junior and senior high school run by Muhammadiyah Foundation. Opened in 1989, it is a boarding school where children receive free education, accommodation, and meals. The school has 135 male and female students, ranging in age from 11 to 16. Approximately 25% of the students are orphans; the rest come from poor families.



TTI Manager, Project Services Susanne Adamson (third from left) joins Sakti and Ibu Puspa in delivering four personal computers to the school.



Students practice their computer skills.



Chicks – ready to harvest.

Nur Ikhlas School

Duri, Indonesia

Project: Fish farming, classroom furniture

CDP involvement since: 2014

Project Description:

In an effort to expand the existing fish farm project at Nur Ikhlas school, in 2017 PT TTI's CDP built five additional permanent fish ponds (two-2x4m² and three-1x2m²). This project strengthens the school's economic base and helps to cover some operating costs. In 2017, Nur Ikhlas school harvested 725 kg of catfish, earning approximately USD 415 .

PT TTI also donated the following to Nur Ikhlas in 2017:

- *Replaced 60 student chairs and repaired 60 desks*
- *Purchased four long desks for kindergarten students.*

Nur Ikhlas School is located about 8 km from Duri, and teaches kindergarten, informal Islamic elementary, and junior high classes to 175 students. The school is run by Nur Ikhlas Foundation, and does not receive regular support from the government. All students attend school free of charge, including the five orphans who reside there.



A worker builds the fish ponds.



Sakti delivers new classroom chairs to Pak Afriwan (Nur Ikhlas School Principal), and Ibu Deti Meinita (Head of Nur Ikhlas Foundation).



Kindergarten students work at their donated long desks.

Other Community Donations

Duri and Jakarta, Indonesia

Project: Other community donations

CDP involvement since: 2003

Project Description:

During fasting in the holy month of Ramadhan, thousands of people flock to the Istiqlal Grand Mosque in Jakarta to pray and receive 'iftar', a breaking-of-the-fast meal. In 2017, the mosque (the largest in Southeast Asia) ran out of resources to serve meals to everyone. PT TTI's CDP provided a financial donation to help them distribute more meals.

During Ramadhan, PT TTI's CDP also made small donations to various community initiatives around Duri, as well as donations to two mosques located next to PT TTI's Jakarta office.



People gather outside the Istiqlal Grand Mosque during Ramadhan and receive their 'iftar' (breaking-of-the-fast) meal.

Tree Planting

Duri, Indonesia

Project: Tree planting

CDP involvement since: 2015

Project Description:

This project provides a greener and healthier environment for PT TTI's CDP partners. In 2017, two CDP partners (Darunnajah School and Petroleum Technical High School 3) were provided with 20 fruit trees each.



Sakti joins students prior to planting trees at Darunnajah school.



Pak Kabul (right, in white shirt) and Ibu Puspa prepare to plant a tree at Petroleum Technical High School 3.

PKK Balai Raja

Balai Raja-Duri, Indonesia

Project: Women's farming program

CDP involvement since: 2015

Project Description:

This program provides support to approximately 30 female farmers. In 2017, PT TTI's CDP donated fertilizers to the three groups of 10 farmers, who planted: cassava, corn, long beans, and kangkung.

In 2017, the group of women harvested twice, earning a total net income of 600 USD (200 USD per group). The most successful farming items were long beans and cassava. This farming program has created new business opportunities for the women to provide for their family needs. Not only do they receive additional income from the vegetables they sell, but they can also provide vegetables to their family for free, by using the vegetables from their farm.

PKK Balai Raja is the local community organization under Bengkalis Regency that supports and empowers women in the Balai Raja area. It is located in near Nur Ikhlas School. PKK Balai Raja runs programs such as: healthcare, Islamic teachings, and life skills (including farming).



Students from nearby Nur Ikhlas school visit the farm.



Ibu Puspa delivers fertilizer to PKK Balai Raja for their farming program.



Sakti helps harvest kangkung with Ibu Deti Meinita (Head of PKK Balai Raja) and women from the farming group.



Cassava plants —about four months old.

Remote Village Health Care

*Bulu Manis and Boncah Mahang,
Riau, Indonesia*

**Project: Remote health care in two
villages**

CDP involvement since: 2015

Project Description:

In Indonesia, 56% of the population live in rural areas. Of this, approximately 50% have limited access to health care services. The country has many local community health centres, which provide health care services to rural and remote villagers. Even still, people must travel to access the services at the health centre.

To help treat these villagers, PT TTI's CDP partnered with two Local Community Health Centres (Petani and Boncah Mahang) and traveled to two remote areas where the team conducted a one day health care event, twice a year. Here, villagers were provided with free medical and dental consultation, treatment, and medication as required.

In 2017, the health care events were held at Bulu Manis village, about 20 km from Duri, and Boncah Mahang village, approximately 30 km from Duri. At each event, approximately 200 people of all ages were seen and/or treated by health care practitioners.

PT TTI's donation included: medical education and consultation, medical treatment and prescriptions, and dental treatment and education.



A mother brings in her child for medical consultation at the Bulu Manis health care event.



Villagers from Bulu Manis consult with doctors.



Pak Kabul and Ibu Puspa join the head of Boncah Mahang village, Pak Nasib (second from right) and other villagers in December.



A dentist checks a patient at Bulu Manis in May.

Workshops

Duri, Indonesia

Project: Life skills training

CDP involvement since: 2015

Project Description:

One of PT TTI's CDP criteria is to support life skills for women and children. As such, in 2017 PT TTI collaborated with three CDP partner schools (Darunnajah, Nur Ikhlas, and Muhammadiyah) to provide a half or one-day life skills training to students, on different topics. At each workshop, an external keynote speaker presented, and the students had the opportunity to ask questions and practice their skills.

In June, training was given to 20 students and teachers on how to efficiently and safely run a chicken ranch project. In 2017, chicken ranching was being run at two of the schools (Muhammadiyah and Darunnajah), and the students provided most of the help to maintain and operate the ranches.

In August, the workshop focused on fish farming, another valuable life skill and a project that was started at Nur Ikhlas school in 2017. Approximately 20 students and teachers learned from an expert about how to spawn cat fish and run a fish farm.

Lastly, in October, over 45 female students and teachers from Muhammadiyah and Darunnajah schools participated in a life skills training class on how to create handicrafts from recycled materials. This workshop was so successful, that PT TTI's CDP will continue to support this training in 2018.



Chicken ranch workshop at Darunnajah School.



Students learn from instructor Ibu Yanti Sarmi (standing) how to make handicrafts from tin cans.



Pak Herianto, the instructor for the fish farming workshop, selects fish for spawning.



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