DIRTY WATER KILLS MORE CHILDREN THAN WAR, MALARIA, AIDS AND TRAFFIC ACCIDENTS COMBINED

Interesting Water Facts. Food and Waterwatch
Millions of people worldwide are still unable to access safe and quality water; others do have access to water, but it is of dubious quality and sometimes they are provided with water but only for a few hours during the day.

The ingestion of unsafe water subjects people to the risk of infection by multiple parasites and germs, in addition to possible chemical or metal contaminants, or others that can cause diarrhoea, cholera, typhoid, polio, blindness and hepatitis, and even malnutrition and death.

“Dirty water kills but also its scarcity and poor condition is responsible for decreased community development”

The lack of safe drinking water and poor nutrition is an explosive mixture that triggers mortality rates to unacceptable levels (every 20 seconds a child dies from curable causes). When those affected by these diseases are persons as vulnerable as children under 5 years who are also malnourished, something as simple as diarrhoea becomes a matter of life or death. Oxfam Intermon 13/11/2014.

This is certainly a dire situation that is preventable and a pending task and responsibility to humanity for politicians, as well as public and private players who must join forces to seek to minimise, and ideally eliminate, this unfortunate situation.

For this reason, INCLAM, a private company specialising in Water Engineering and MSH (Management Sciences for Health), an international NGO specialising in Health and health education, have joined forces to implement a joint Programme to provide integrated technical educational health solutions, with the aim of contributing through the countries and public and private decision-makers to provide safe and quality drinking water to those populations that lack that vital element.

With the goal of further contributing to the achievement of the Sustainable Development Goals (SDG), INCLAM and MSH-Peru have decided to join forces to increase their impact on the SDG, contributing to goal 6 of improving access to drinking water, and sanitation, a comprehensive, effective and proven solution.

Improving the water supply, sanitation and management of water resources can boost the economic growth of countries and contribute greatly to poverty reduction.


Therefore, economic studies show that investment in providing safe drinking water to the population and avoiding many deaths also generates many more productive days every year. Thus, it has been estimated that the economic benefits would range between US$3 and US$34 for every dollar invested in providing safe water and sanitation, depending on the region of the world and the technology applied in each case (World Health Organization – WHO), and this is due to savings in health care costs, increased productive man-hours, increased school attendance, saving time as a result of more convenient access to services and deaths avoided, among others.

INCLAM and MSH have joined forces to implement a joint Programme to provide safe drinking water through integrated technical educational health solutions.

WATER AND ITS IMPACT ON HEALTH

IT IS ESTIMATED THAT 1.6 MILLION PEOPLE DIE EACH YEAR FROM DIARRHOEA-RELATED DISEASES (INCLUDING CHOLERA) ATTRIBUTABLE TO THE LACK OF ACCESS TO CLEAN DRINKING WATER AND BASIC SANITATION, AND 90% OF THOSE PEOPLE ARE UNDER 5 YEARS OLD, MAINLY LIVING IN DEVELOPING COUNTRIES

World Health Organization (WHO)

SUITABLE INVESTMENT IN MANAGEMENT, INFRASTRUCTURE AND SERVICES RELATED TO WATER WOULD LEAD TO CONSIDERABLE FINANCIAL SAVINGS AS IT WOULD AVOID THE COSTS CAUSED BY POLLUTION AND NATURAL DISASTERS, AS WELL AS A MARKED IMPROVEMENT IN PRODUCTIVITY

The INCLAM Group is an international group that brings together companies whose main vectors are water, the environment and climate change. We apply quality and professionalism as a responsible business principle with the purpose of providing our clients with an integral support service in the framework of governance and efficient knowledge management. We are specialised in consulting, engineering and construction, with special emphasis in the water industry: evaluation, planning and integral management of water basins, water treatment, Engineering, Procurement and Construction (EPC), direction and supervision of construction, development of climate change adaptation and mitigation projects, and renewable energy. The technological factor always accompanies our activity, with innovation being our motive for improving technically.

CO₂ Neutral Group
Recognised as a “PYME Innovadora” (Innovative SME) by the Spanish Ministry of Economy and Competitiveness

5%-10% of turnover invested in RDI

26.5% increase in human resources*
*from 2014 to 2015

1st company to be awarded MAGRAMA accreditation for offsetting its carbon footprint

Income of 31.05 million and EBITDA of 3.4 million euros in 2015

+80% of employees have university degrees

Lead in the National Register of CO₂ Absorption Projects from the Spanish Office on Climate Change

ASICMA Presidency (Association of engineering consultancy firms in Madrid)

WHERE ARE WE

Our EPC division occupies a wide range of both markets and products within the areas of water treatment, purification, desalination, and hydraulic, energy and industrial infrastructure. If there is an element that is an inherent guarantee of our work, it is the delivery of high quality services and construction, in the set time frame and following the budget. We have increased the volume of projects thanks to our differentiation as an engineering expert which places its knowledge at the service of people, respecting the environment and making responsible use of technology.
For 10 years we have been working in more than 1,000 marginalised rural and urban communities in coastal, mountainous and jungle areas of Peru in order to strengthen social capital, improve the factors that determine public health and promote sustainable development.

MSH Inc has operated in 150 countries since it was founded 44 years ago

Over 2000 professionals make up its work team

In the last 10 years, MSH-Peru has worked with 150 municipalities

MSH-Peru has trained over 1000 communities in leadership and management of community health

Over 60000 Peruvian families have acquired healthy practices

It has received recognition from ministries of health, local and regional governments and private companies

MSH Inc. is a non-profit organisation, which has been using proven and developed approaches to health for 40 years to help leaders, health managers and communities in developing countries to build health systems that are more solid and have greater impact. Its mission is “To save lives and improve the health of the poorest and most vulnerable in the world by bridging the gap between knowledge and action in public health”, under the vision “A world in which everyone has the chance of having a healthy life”, guided by the values of Integrity, Excellence, Vitality, Collaboration and Empowerment.

In Peru MSH-Peru was created, with the objective to help improving the health of the population and contribute to local development, primarily of the population who are vulnerable and at risk.
At the Summit for Sustainable Development, that took place in September 2015, the State Members of the UN approved the 2030 Agenda for Sustainable Development, that includes 17 Sustainable Development Goals (SDGs) to put an end to poverty, fight against the inequalities and confront the climate change.

Access to drinking water is part of goal 6 of “Clean water and sanitation”. Achieving these goals will, in addition to improving greatly the living conditions of the population, set a very important benchmark for any country in regard to the International Community: it enhances competitive advantages while awakening a renewed interest from basic development agents, such as multilateral entities, development banks and private investors.

Our programme “Water is Health” is designed to support our customers in achieving this goal. The improvement of water supply sources not only contributes to the aforementioned goal, but is also a key strategy for goal 1 of ending poverty, 3 of Health and welfare and 12 of responsible production and consumption.

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Since the Millennium Development Goals were signed by the United Nations, much improvement has occurred in the drinking water goal, but much remains to be achieved, particularly in rural areas; and this is where we present our programme. Our Programme aims to help create a world with more opportunities for all, satisfying the needs of our customers and bringing safe water to those places whose inhabitants do not currently have access to it.

The Programme “Water for Health” lays out technical solutions and provides to the authorities the tools to prevent and resolve conflict situations.
In much of Peru, mainly in rural areas, water is not fit for human consumption. There is a shortage of drinking water and the main water sources (rivers, streams, wells, among others) are polluted by domestic effluent and chemicals produced by economic activities. Furthermore, families use inadequate storage and water consumption practices.

These factors threaten the health of the population, mainly of women and children. In the province of Loreto, as part of the implementation of the Health Emergency in the basins of the Pastaza, Marañón, Tigre and Corrientes rivers – Loreto Region (2014–2017), the Project supplies drinking water and provides education on healthy practices to the families of the 65 native communities, which are part of 2 provinces and 7 districts of the Loreto region.

For those 65 communities 9 types of different solutions have been designed, depending on the flows of the sources and water quality, as well as on the specific treatment needs of each community, to eliminate contaminants in water sources in the area. While the Social Component develops the “Improvement of Water and Family Hygiene” methodology to generate among the population a sense of ownership of the treatment plant and foster its care, use and maintenance; as well as promote healthy habits in families concerning the collection, transportation, storage and consumption of safe water, rational use of water; and hygiene practices.

Another important aspect is the activities for strengthening local water management and the generation of sustainability mechanisms with community leaders.

**OUR EXPERIENCE IN PERU**

**WE HAVE SUPPLIED A TOTAL OF 20,606 PEOPLE SPREAD OVER 4,000 FAMILIES, OF WHICH 3,100 HAVE CHILDREN UNDER 5 YEARS OLD**

4.24 million people do not have access to drinking water

RURAL SECTOR
2.7 million inhabitants

URBAN SECTOR
1.5 million inhabitants

**LORETO**

Tigre river basin
10 communities

Corrientes river basin
8 communities

Pastaza river basin
27 communities

Marañón river basin
17 communities

Pastaza river basin
27 communities

**PROVINCES**

Loreto, Datem del Marañón

**DISTRICTS**

Nauta, Pastaza, Andoas, Parinari, Tigre, Trompeteros and Urarinas

**COMMUNITIES**

65 native communities

**ETHNICITIES**

Kichua, Cocada (Kukama Kukamiria), Quechua and Uraña
EDUCATIONAL COMPONENT
The most recent estimates based on goal 7c of the Millennium Development Goals suggest that, overall, the benefits of achieving universal access to sanitation outweigh the costs by a factor of 5.5 for every 1.

UN Water, 2014

**METHODOLOGY**

1. **DRINKING WATER**
   - Installation of the water treatment plant: ownership, operation and maintenance

2. **ADEQUATE WATER COLLECTION AND TRANSPORTATION**
   - Collection and transportation of drinking water from the treatment plant to the home in clean containers with lids

3. **ADEQUATE WATER CONSUMPTION**
   - Proper storage of water in the home: in high places and buckets with a spout, which are clean and have a lid
   - Adequate consumption of water in clean glasses, cups and jugs

4. **FAMILY HYGIENE**
   - Hand washing
   - Proper disposal of faeces

5. **ORGANISATION, ARTICULATION AND STRENGTHENING OF POWERS**
   - Coordination with local governments and health centres
   - Organisation and strengthening of the Sanitation Services Management Boards
   - Coordination with the Municipal Technical Departments
   - Coordination with the Education and Health sectors and social organisations in the Community
DIARRHOEA IS THE SECOND LEADING CAUSE OF INFANT MORTALITY IN THE WORLD. TRAINING ON HYGIENIC HABITS COULD PREVENT 88% OF THOSE CASES

IMPROVED WATER AND FAMILY HYGIENE

It aims to ensure that families know and implement healthy sanitary practices related to maintaining safe water, rational use of water and hygiene practices.

We raise the awareness of and encourage families to adopt healthy sanitary practices related to safe water, rational use of water and hygiene (hand washing and proper management of faeces).

**AWARENESS RAISING**

We articulate educational and communication activities with educational institutions on healthy practices related to safe water, rational use of water and hygiene.

**EDUCATIONAL ACTIVITIES**

We strengthen the organisation and powers of local/community authorities responsible for the management and operation of water and sanitation systems, as in the case of Peru, the Water and Sanitation Services Management Boards (JASS) and their coordination with the Municipal Technical Sanitation Departments (ATM).

**THE ADMINISTRATION**

**TOOLS**
It is a common error in the engineering and construction sector to complete projects without taking into account the population that will consequently be using these services.

Experience has shown us that it is not enough to give communities coverage through the supply and installation of drinking water treatment plants, which although necessary is not sufficient. Therefore, it is imperative to emphasise promotion and training on changes to habits of the population which, allied to the efficient community and local management of water, generates sustainability and raises their quality of life. That quality of life is evident in the improvement of the main health indicators and socio-economic development that the population would gain as a result of a comprehensive drinking water service.

We are confident that any work done from a holistic viewpoint will generate sustainable results; we are committed to finding solutions fitting the communities for which our projects are designs. Our networks include all kinds of development organisations (NGOs, governments, multilateral organisations, development banks, etc.), and we provide the professional teams that guarantee innovative, sustainable results. Our experience endorses us.

Therefore, the PWH includes an Educational Component exclusively dedicated to evaluating and defining the feasibility of our water treatment plants from a social angle, providing our clients with integration strategies.

**Lines of Action**

Develop and update innovative, comprehensive and sustainable models to supply water to the populations of dispersed, excluded and vulnerable rural areas.

**Promote the inclusion and participation of the population** (families, community and local leaders) in better management of water resources, through the empowerment and strengthening of the capacities of social players, considering access to safe water as a human right.

**Strengthen the institutional and regulatory framework**, at community and local levels (community, district government, provincial government, region) for improved and sustainable community and local management of water and sanitation services.

**Promote public and private investment** to increase coverage in the supply, use, management and preservation of drinking water and environmental sanitation, taking into account environmental care and protection of water and its sources.

**Approaches**

**Human Development**: Water is the source of life of all things and affects all aspects of human development. When a person is denied or lacks access to safe water, his choices and freedom are constrained by illness, poverty and vulnerability.

**Health Promotion**: For a part of the global population without access to improved water sources, water pollution during transportation, storage and use in the home presents a significant risk to health. For this segment of the world population, education in healthy lifestyles on improving water and family hygiene will bring benefits by reducing disease and other benefits related to improved health.

**Human rights**: The United Nations General Assembly and Human Rights Council have recognised the human right to safe drinking water and sanitation. This is derived from the right to an adequate standard of living and is inextricably related to the right to the highest attainable standard of physical and mental health, as well as the right to life and human dignity.

**Multiculturalism**: refers to the meeting of cultures and harmonious coexistence between them, as well as the implementation of activities to foster respect for their cultural differences and expressions.

**Environmental conservation**: Also, within the framework of sanitation projects, care for and protection of the environment should be promoted, seeking to maintain the balance of the ecosystem.

**Inclusion of indigenous peoples and Afro-descendants**: encourages the inclusion of indigenous peoples and Afro-descendants, traditionally overlooked within development processes. To this end, efforts are aimed at creating conditions that allow inclusion of those population groups.
They inform and raise the awareness of authorities and families on the Improvement of water and Family Hygiene.

They promote and reinforce community leadership and management powers in community and local authorities.

They strengthen the powers (knowledge and skills) of families regarding healthy lifestyles and adopting healthy practices that are key in relation to drinking water, hygiene and proper disposal of faeces.

They raise the awareness of families, especially children about the importance of the use of and care for the water treatment plant, and about improving healthy practices (consumption of drinking water, hygiene and excreta management).

Coordination and evaluation meetings with health centres.

To encourage families to implement healthy practices learned.

To motivate and mobilise children and girls of school-going age, families and communal authorities in adopting healthy practices in relation to the consumption of drinking water, hygiene and proper disposal of faeces.

Monitoring of the implementation of healthy practices and strengthening the messages of educational activities in families.
At INCLAM, we understand that when emphasising the training of people in healthy habits, it is also necessary to facilitate them with the means to practise the habits mentioned above, i.e. clean and quality water.

The solutions we offer include the extraction of water from the source, piping it to the water treatment plant, the water treatment process, the storage tank for treated water, through to supplying it to the population.

Another point worth mentioning is the construction, installation and testing phase of the project. During this phase the population still does not benefit from a drinking water service, since the project is being implemented; however, they enjoy other very important advantages. We are talking about a source of income from remunerated work, encouraging rural families to improve their living conditions.

In addition, the local population is directly involved in the project in that it is they who develop and execute the work entailed in this supply programme both for themselves and for the rest of their community. The locally recruited workforce will act in direct coordination with the INCLAM specialised team that manages the programme to its completion according to the agreed/foreseen directives.

Thus the community becomes the main driver of the initial programmes and takes responsibility for the leap forward towards a better way of life.
INCLAM develops all kind of supply solutions; family units for the supply of drinking water to the kitchen and the rest of the dwelling; mobile units for rural communities and emergency situations for up to 2,400 people; hybrid fixed and mobile plants for communities from 500 to 5,000 people; pressure filtration technologies for rural communities from 4,000 to 10,000 people; and continuous wash filters for communities larger than 10,000 people.

However, our priority is to help the communities most in need, and, therefore, the drinking water supply solution for a population of up to 5,000 inhabitants (and consumption of 16 gallons per head and day) that best fits our profile is described in detail as follows.

Rotavirus is the most common cause for childhood diarrhoea around the world and represents a considerable cost to the community; it is relevant to include it in any evaluation of a preventive programme.

In Mexico, diarrhoea caused 5,955 hospitalisations with a cost of $5.5 million. Average cost per each diarrhoea event was US$936.

Resource utilisation and costs for the treatment of severe rotavirus diarrhoea in Mexican children from the perspective of the provider of health services.
An independent portable system designed to continuously produce drinking water from any type of water: fresh water, brackish water and seawater.

It is designed to operate autonomously using solar energy. It is fitted with three 250 Wp photovoltaic panels. It can also operate with a generator.

It hardly requires any maintenance, keeping costs minimal.

It purifies water by ultrafiltration and reverse osmosis, without using chemicals.

Model R.OI-2 and R.OI-15

An emergency plant designed to produce drinking water from any type of water: fresh water, brackish water and seawater.

It is designed to be transported by air, with two units in each IATA container.

It can perform filtration or filtration + reverse osmosis, depending on the raw water quality.

It is fitted with an optional 100 Wp photovoltaic panel, which can keep the equipment on standby when not in operation. This saves both energy and maintenance costs given the system can resume operation automatically.

Designed for Response Centres in the event of emergencies, civil defence, the Armed Forces...
Model R.FD-3

An excellent solution for supplying drinking water to small populations, particularly in disadvantaged areas

Quick to manufacture, install and start up

Centralised and automated operation from an easy-access control panel

It comes with a stainless steel frame to make loading, unloading, and overland transport easier

Manufactured with top-quality materials and equipment

Model P.LCI-12

Designed to supply drinking water to populations of up to 30,000 inhabitants

All the necessary equipment is included in a single compact filtration module

They are easy to transport by truck and can be moved based on the client’s needs

Manufactured with top-quality materials and equipment

Continuous cleaning technology

Model P.OI-50

A specially designed plant to purify highly contaminated or high-salinity water through filtration with reverse osmosis membranes

These systems can be housed in adapted intermodal containers, making them easier to transport and set up, and providing overall protection from external agents

Manufactured with top-quality materials and equipment

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Each dollar invested in diarrhoea prevention yields approximately US$25.80
Water from the river/well is impelled with a 4 m³/h, 48-metre water column, submersible pump, along a 300-yard conduit to the first phase of the pre-treatment.

The pre-treatment consists of a roughing filter through rings that removes large particles. Then micro-organisms are eliminated with an in-line shock treatment with chlorine. In succession, coagulants are added to agglutinate the suspected solids and facilitate their separation in the next phase, lamellar decantation. The decanter will function also as contact chamber between the water and the added hypochlorite. In the decanter we remove up to 95% of suspended solids in water.

The treated water, free from impurities will be stored in the daily-supply tank so that it ready to be uses as per the necessities of the population.

The water goes through a sand filter, which eliminates suspended solids that have not been decanted. To empty and clean the plant it is necessary to pipe the water by gravity to the nearest channel or location indicated by the customer, at a maximum distance of 30 m. Should a longer conduit, drive speed (due to lack of height), or supplementary works be required, INCLAM will design and provide a quote for them for free, and can undertake to execute them.

We will have another filter in series, this time made of activated carbon, where the other suspended solids will be retained.

As a final treatment stage, the water is subjected to a final chlorination in order to ensure the absence of microorganisms and meet the WHO Standard, and also sent to the storage tank.
“DRINKING WATER AND GOOD PRACTICES ENSURE THE HEALTH OF MY FAMILY”
GREYSI, HOUSEWIFE FROM PUERTO ALEGRÉ

Greysi Huiñapi Cariajano lives in the community of Porto Alegre; she is a 23-year-old housewife and also has a small wine shop. Some time ago, her family had no drinking water and as a result her two children were suffering from diarrhoea.

“We drank water from the stream and that made us feel unwell. Nor did we know any hygiene practices, and we usually ate on the floor”, Greysi tells us.

The lack of knowledge of self-care practices and of safe drinking water deepened the problem, and on a daily basis there were cases of diarrhoea in the community; an 8-year-old child even died.

When the water treatment plant and washbasins were being installed in Porto Alegre, she felt she had to change her habits and, in this regard, her husband, who is a teacher, played a very important role, encouraging her. “I wanted to learn about hygiene and the consumption of drinking water and had the will to change for the health of my children”, she says.

Now she refers with joy to all the things she has learned as part of the project. “I am a clean and healthy person who consumes safe drinking water. We carry out healthy practices in our home, we keep it tidy and have spaces for water and the kitchen”. However, she plans to continue improving her home, with the construction of a latrine.

Greysi also tells us that there was constant support from the facilitators, INCLAM’s social officers, community authorities, through home visits and training, among other actions. “They gave us buckets, dishes, ladles, jugs and motivated us with prizes in school competitions”, she recalls.

Everything achieved at the level of families and communities has helped Porto Alegre families live healthily and happily. For that reason, Greysi thanks INCLAM and calls for the measures to continue.

“My children do not get sick”

“I HAVE THE OPPORTUNITY TO WORK AND BE ONE OF THOSE RESPONSIBLE FOR MY COMMUNITY LIVING HEALTHY AND HAPPY LIVES”
JUAN, PLANT OPERATOR

The words of Juan Pipa Mucushua, resident of the Nueva Esperanza community and operator of the water treatment plant installed in that town, are evidence of how people can change both individually and collectively as a result of having safe drinking water.

Juan is also a farmer, he is 44 years old and father of five children Before the project was implemented, he suffered, just like other inhabitants of his community, the consequences of the lack of safe drinking water, drinking water from the River Pastaza.

Juan was chosen as an operator of the plant and began to act as facilitator of water and hygiene. His training as an operator has included training on the operation and maintenance of the plant. That is to say, he plays an important role in the daily routine of children and parents who collect and consume drinking water.

The frequent incidence of diarrhoea in children was an emergency and one of the priorities to be resolved. “We had to take decisions and save our population. In 2013 we held a meeting in the community in which we agreed to take action and negotiate with the State.”

Thus two years passed, in which the community made numerous efforts to bring drinking water to the inhabitants, taking briefs, minutes of meetings with agreements and information about the community and their situation to the competent authorities of their district.

“Now my children do not get sick”

“We give a good 24-hour drinking water service and guide families on how to collect and transport drinking water”

The activities that he carries out have led to many positive changes in Juan’s life. “I feel happy and at peace with myself because my community have drinking water. It is a blessing from God: families are happy and healthy”, he says.
SHE HAS OVERCOME HER PEOPLE'S BELIEFS AND MACHISMO FOR HER FAMILY TO ADOPT HEALTHY PRACTICES
LIDIA, A HOUSEWIFE FROM CAMPO VERDE

Changes in beliefs and routines, although they may represent improvements, are not easy to accept.

They involve challenges and effort, and above all, a lot of tolerance and perseverance. Proof of this is Lidia Carihuazairo Bernuy, a 22-year-old woman from the Campo Verde community, who had to defy the initial refusal of her husband for her family to consume drinking water and wash their hands to take care of their health.

But time and, above all, the elimination of illness in her home proved her right about the importance of adopting healthy practices. Today not only she, her husband and two children wash their hands before eating and preparing masato, a typical drink of the area, but they also teach their relatives to do so.

“One of the reasons why my husband did not want to drink water from the sink was because of its new taste. He told me that it was not part of our culture, that our parents and grandparents had never taken it”, Lidia tells us. “But I remember they were always sick”, she points out.

At first, she had to attend project meetings and collect drinking water while putting up with complaints at home and also criticism from her neighbours and relatives who told her, “You’re disobeying your husband”.

But she was tired of her children getting sick all the time. “They had diarrhoea, a temperature, headaches, and I always went to the doctor who took quite a bit of money off us and we didn’t see any improvement. Our culture had many traditions, myths and beliefs that prevented us from changing”, she says.

She also continued to receive visits at her home from INCLAM officers and community facilitators, she continued collecting and making others drink clean drinking water, participating in meetings and other initiatives that she carried out with a lot of enthusiasm. Her children were her best allies in raising her husband’s awareness. “They were the first who got into the habit of consuming drinking water and whenever they returned home they told her that the INCLAM educators had told them they should wash their hands before eating so as not to get sick”.

Now they have a rule at home established by her husband, “before eating, wash your hands”, and he makes sure it is adhered to.

Lidia’s family have adopted other healthy practices: they clean their home, they have built a table, installed the bathroom corner and safe water, and are giving more importance to the education of their children. In the future they plan to have a kitchen and a latrine.

“MY FAMILY COMMITTED TO THE PROJECT, I GOT INVOLVED AND THAT WAY I MANAGED TO ENCOURAGE MY HUSBAND AND MY CHILDREN. WE HAD FAITH IN WHAT WE WERE TAUGHT AND THAT WAY WE MANAGED TO STOP GETTING SICK”

Lidia Carihuazairo Bernuy, a 22-year-old woman from the Campo Verde community
Alvaro has a master’s Degree in Environmental Science specialised in Environmental Technology, and Master in Infrastructure Management and Environmental Services.

His most significant references include most notably the following:

- **EPC of the CIR (Industrial radio communication complex), Aragua State. The Bolivarian Republic of Venezuela.** (US$28,548,547.12)
- **EPC and maintenance (12 months) for the Waste Water Treatment Plant in Colonia Tovar, with a treatment capacity of 70 l/s. Tovar Municipality. Aragua State. The Bolivarian Republic of Venezuela.** (US$7,441,860.00)
- **Supply, installation and commissioning of three compact drinking water treatment plants in Daloa, San Pedro and Tabou cities, with treatment capacity of 100 l/s, 100 l/s and 60 l/s, respectively. The Ivory Coast. (US$2,120,555)***

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Roberto is Technical Engineer in Public Works (equivalent to Civil Engineer) and he also has a master’s degree in Industrial Organisation awarded by the Polytechnic University of Catalonia.

He specialises in the design and supervision of hydraulic works.

The following should be highlighted among his main water supply projects:

- **Engineering, Procurement and Construction (EPC) and maintenance (12 months) for the Waste Water Treatment Plant in Colonia Tovar, with a treatment capacity of 70 l/s. Tovar Municipality. Aragua State. The Bolivarian Republic of Venezuela.** (US$7,441,860.00)
- **EPC of the drinking water treatment plant of Los Pedros with treatment capacity of 100 l/s. Falcón State. The Bolivarian Republic of Venezuela.** (US$1,950,000.00)
- **Engineering, Procurement and Construction (EPC) of the drinking water treatment plant, treatment capacity of 100 s/l. The Republic of Honduras (US$995,465.92)***

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Paloma has more than 12 years of experience designing and managing projects focused on improving people’s lives. In addition to holding a master’s degree in Sustainable Development and Corporate Responsibility from the EOI Business School. She has a degree in Psychology from the Universidad Pontificia Comillas de Madrid (UPCO) and is a University Expert in International Cooperation Project Planning and Management from the National University of Distance Education (UNED) and the Organization of Ibero-American States (OEI). She has also been certified as Partnerships Facilitator for Development by the Partnership Brokers Association.

Her areas of expertise include sustainable development, corporate responsibility, behaviour analysis, participatory processes, group motivation and analysis of social variables. She has developed her career managing her projects and strategic planning for sustainable development projects funded by private donor initiatives, national cooperation agencies, bilateral and multilateral organisations. With her solid knowledge about the dynamics of international cooperation and her experience in several countries in Africa and Latin America, her greatest strengths are the motivation for change, great public speaking skills and her ability to manage projects during the whole process cycle.
EDGAR MEDINA
emedia@mshperu.org

EXECUTIVE DIRECTOR OF MSH-PERU

He is a surgeon, with a Master’s Degree in Public Health from the Universidad Peruana Cayetano Heredia and in Health Services Management from the Universidad de San Martín de Porres.

With an extensive career spanning over 18 years in the management of health, social development and economic projects in marginalised urban Coastal communities and rural communities in Mountainous and Forested areas, which are vulnerable, in high risk (drug trafficking and subversion) and in situations of exclusion. He also has extensive experience in the design and implementation of health systems, monitoring nutrition in healthy practices, community-based information systems, and community and local development processes.

He has 15 years’ experience in project management with the United States Agency for International Development (USAID) in the areas of intervention of the Alternative Development Programme.

Since 2006 he has held the position of Executive Director of Management Sciences for Health-Peru. During his tenure the two stages of the Project Healthy Municipalities and Communities were implemented in more than 1000 Andean and Amazonian communities who improved their health practices and boosted their local capacities. With an implementation budget of approximately US$25 million.

YANINA KANAMORI
ykanamori@mshperu.org

OPERATIONS AND FINANCE MANAGER

She is an accountant by profession with a Master’s Degree in Administration and Finance and over 12 years of experience in the Administrative and Financial Management of development projects in the private and public sectors.

Her professional experience includes significant contributions to the programmes implemented under the auspices of USAID, the European Union, UNICEF, the Inter-American Development Bank, the Ford Foundation, the Catholic Relief Services, the Atocongo Foundation and the Ministry of Labour of Peru.

She has extensive experience as logistics coordinator of international multi-centre projects with offices in the United States, Bolivia, Brazil, Ecuador, Colombia and Nicaragua, where she interacted with people from different cultures.

In addition, her work with communities in situations of exclusion has allowed her to gain a meaningful understanding of local processes, cultures and people.

ROCÍO VALLE
rvalle@mshperu.org

WATER AND SANITATION MANAGER

She holds a Degree in Nursing and a Master’s Degree in Social Management from the Pontificia Universidad Católica del Perú.

She has over 14 years’ experience in the management and implementation of health and social development projects in rural, vulnerable and excluded communities in Coastal, Mountainous and Forested areas of the country.

She has held managerial and operational positions in the management of International Cooperation programmes and projects and public funds, with an emphasis on early Childhood Development approaches, Health Promotion, Water and Sanitation and Social Development in various work scenarios.

From 2006 to 2014, at Management Sciences for Health Inc. she was in charge of the implementation of the Healthy Municipalities and Communities (HMC) Project in communities in Mountainous and Forested areas of Peru and in intervention areas of the Alternative Development Programme (ADP).

Currently, she serves as Head of the Emergency Health Project – Educational Component in Management Sciences for Health Peru, affiliated with MSH Inc.

EVELYN DEL P. TORRES
etorres@mshperu.org

MONITORING AND EVALUATION MANAGER

She is an obstetrician and educator with a Master’s Degree in Public Health from the Universidad Peruana Cayetano Heredia. She has expertise in monitoring, evaluation and systematisation of social and health programmes and projects in the public and private sector.

With experience in designing Baseline studies, interim and final evaluations of projects related to the topics of population, health promotion and local development in marginalised rural and urban communities in Coastal, Mountainous and Forested areas of Peru.

She has produced documents on the systematisation of projects related to maternal and child health and local development, communal surveillance processes which incorporate the perspective of gender equality in health, and others linked to processes for capacity building with emphasis on the community scale.

She has implemented systems for monitoring and evaluating projects, drafting documents for operational and budget planning, defining and operating the system information flow, based on the conceptual framework and indicators according to the specific causal chain. She has performed tasks to provide technical assistance in every area of work.
remarkable aspects

OVER 100 PLANTS INSTALLED

1,800,000 INHABITANTS SUPPLIED WITH DRINKING WATER

OVER 300 CONTAINERS TRANSPORTED

OPERATIONS IN MORE THAN 50 COUNTRIES

139,000 PEOPLE (ADULTS AND CHILDREN) WITHIN THE MSH-PERU HEALTHY COMMUNITIES AND MUNICIPALITIES PROJECT

WE HAVE BEEN WORKING ON TURNKEY PROJECTS SINCE 1999

OUR TEAM INCLUDES MORE THAN 200 HIGHLY SKILLED PROFESSIONALS

WE ADAPT THE TREATMENT PROCESS TO ALL KINDS OF RAW WATER

WE TREAT AROUND 6 MILLION LITRES OF WATER HOURLY

WE IMPROVE THE HEALTH INDEX OF ALL THE COMMUNITIES WITH WHICH WE INTERACT