



Communal Infrastructure Basic services for all

During the UN-HABITAT III conference in Quito in October 2016, the new Urban Agenda has been adopted. It states, that “Cities and human settlements must be for everyone”. Thus, equal rights and access to adequate housing, basic services and functional social infrastructure are a prerequisite to live an adequate life. With well over half of the global population now living in urban areas, expanding cities need improved and appropriate communal infrastructure.

Cities have long been attractive destinations for migrants but they are facing increasing challenges such as poverty, inadequate housing, insufficient energy supplies, inappropriate water supply and sanitation services, environmentally unsound disposal of solid waste, inadequate health issues, environ-

mental degradation, the impacts of climate change and other concerns.

Currently, some countries (e.g. Turkey, Pakistan, Lebanon) are hosting large numbers of refugees fleeing armed conflict which increases the strain on existing infrastructure facilities. In this context, AHT is currently supporting the UNHCR *Refugees Affected Hosting Area (RAHA) Programme* in Khyber Pakhtunkhwa province in Pakistan. This programme provides social and communal infrastructure to hosting communities close to refugee camps affected by the influx of refugees from Afghanistan.

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Dear reader!



Catherine Güttner,
Editor

In this edition of All About AHT Group we would like to draw your attention to the activities of our communal infrastructure department. The need for infrastructure development is one of the great global challenges of our time.

Communal infrastructure refers to the basic physical and organizational structure as well as the facilities needed to sustain the operation of cities and communities. The worldwide urbanization trend, combined with the ongoing refugee crisis, has rendered supplying a growing number of large unplanned settlements with basic services, increasingly

demanding. Nonetheless, building sustainable, inclusive and resilient communities through increased access to basic infrastructure is key to poverty reduction. Development economists also state that communal infrastructure is one of the major determinants of economic growth, especially in developing countries. Over the following pages we will present an overview of AHT's activities, depicting the multiple facets of communal infrastructure.

Additionally, we report on an important event from the Russian companies of the AHT Group: Ms Liudmila Orlova, President of the National Movement Conservation Agriculture, organised the *International Climate, Soil Fertility and Agrotechnology Conference* in Samara in May 2016, gathering high ranked politicians and experts to present and discuss the state of the art of

sustainable agricultural technologies. A field day was organized on the premises of Orlovka – AIC Ltd with a technical exhibition of agricultural machines and machines for conservation land management.

The management of AHT GROUP AG would like to take the opportunity to wish our clients, donors, partner firms and colleagues a Merry Christmas and a happy and peaceful year 2017!

The AHT department for Communal Infrastructure and Governance at AHT headquarters in Essen, Germany. The team is composed of experts from various backgrounds, such as civil and rural engineering, urban and regional planning, geology, economics, political and social science, who deal with the multiple aspects of the work described in this newsletter.



Department for Infrastructure and Governance

New contracts recently acquired by AHT:

Indonesia: Support to Indonesia's Climate Change Response – Technical Cooperation Component (EU) +++ **Pakistan:** German contribution to the Refugee Affected and Hosting Areas Programme (RAHA III) - Consulting Services for Support to Project Implementation (KfW) +++ **Mali:** Technical support to the Permanent Technical Secretariat (STP) of the National Programme for Small-Scale Irrigation (PNIP) (KfW) +++ **Tunisia:** Agricultural and Rural Development around Hill Lakes (DARAL) Engineering & Accompanying measures (KfW) +++ **Vietnam:** Sustainable Management of Phong Nha-Ke Bang National Park II, Avenant (KfW) +++ **Bosnien-Herzegovina:** Wastewater Collection and Treatment Bihać (KfW) +++ **Tunisia:** Study for the elaboration of a Master plan for the modernization of the irrigated public schemes in the Lower Medjerda Valley, supplied by the Laaroussia Canal (Phase 1) and Feasibility Study for the rehabilitation/extension of the transport/regulation capacity of the Laaroussia Canal (Phase 2) (KfW) +++ **Mali:** Technical Assistance for Water Management of the irrigated scheme in Maninkoura (BAD) +++ **Indonesia:** Consulting Services Forest Programme III Sulawesi (KfW) +++ **Palestinian Territories:** Additional Services for the REUSE 2000+ Project, Nablus (KfW) +++ **Mali:** Diagnostic studies for small irrigated schemes of the Indicative Cooperation Program II in the intervention areas of the project MLI/021 (Lux.-Dev) +++ **Egypt:** National Solid Waste Management Programme (NSWM). Consulting Services for Programme Implementation in Qena and Assiut. Lot A – Work packages 1 and 3 (KfW) and Lot A – Work package 2 (GIZ) +++

Titel:

- a) School Boy in Madagascar ©Markus Kirchgessner
- b) School Building in Mali
- c) Construction Site for Water Supply, Pogradec, Albania
- d) Wastewater Treatment Plant, Kafr El' Sheik, Egypt
- e) Simple Transfer Station in Jombang, East Java, Indonesia, for Household Waste

Communal Infrastructure: Basic services for all (contd.)



Ulrich Sammet, Head of Communal Infrastructure and Governance and Ingo Rudolf, Deputy Head of Communal Infrastructure and Governance

Hundreds of millions of poor people in (semi-) urban regions in developing and transitional countries live in poorly serviced, low-income areas and unsafe environments, facing diverse threats to their health and security. The *Violence Prevention through Urban Upgrading (VPUU)* Project in Cape Town and in Western Cape Province (South Africa), being implemented by AHT since 2005, intervenes in such a context. Here, social crime prevention and community policing protection measures complement safe public space and urban infrastructure facility management. However, rural areas, and their own particular infrastructure needs, are not to be overlooked. Being the heart of agricultural production, they require appropriate access to markets as well as educational and social services and opportunities to gain a livelihood for the people who live there. In order to ensure sustainable living conditions and to foster rural development it is necessary that government decisions on

investments respond to the needs of the rural population. Many countries have thus engaged in a decentralization process for their administrative structures and corresponding services. Today, many development projects combine the development of concrete communal infrastructure with the implementation of national decentralization strategies and policies. These strategies and policies provide the framework to introduce and use inclusive community-based planning methods, with rural participatory planning as a central element. One relevant example of AHT's work in this regard is a communal development and decentralization programme in Madagascar (*Programme PDCID*) that supports selected communities in constructing schools and roads in rural areas. One particular aspect of adequate communal infrastructure that directly affects the health and well-being of the population is ensuring appropriate access to improved drinking water supplies. Another aspect is the protection of public health against diseases spread through the uncontrolled disposal of faeces or untreated wastewater into the environment as a result of poor sanitation and hygiene facilities as well as the uncontrolled dumping of solid waste. The responsibility to ensure these services and their operation and maintenance most usually lies with the communal authorities.

In the sector of Solid Waste Management (SWM) AHT advises communities and public companies in the environmental sustainable management from collection, transport, treatment to landfill.



Rural Road Construction in Mali

In this context, AHT's services in the field of operation and maintenance are increasingly called upon to secure an adequate life span and sustainability of communal infrastructure. A main challenge is to support and manage the sustainable transfer of responsibility for operation and maintenance of newly constructed or rehabilitated facilities to their future users and/or operators. Once construction or rehabilitation activities are finalized, funds for operation and maintenance services must be in place, as should the necessary capacities and skills of the concerned utility staff and management.

AHT has a long and proven experience in the development and implementation of training programmes, including training of trainers, on-the-job training and management support, all of which is crucial for the sustainable operation and maintenance of communal infrastructure. AHT is also providing advisory services for institutional reorganization in order to enhance provision of social services and develops and implements quality assurance mechanisms for infrastructure investments financed through communal development funds. Strengthening communal administrations in generating economic development is becoming increasingly important. In Senegal the *Agency for the Implementation of Public Construction Projects (AGETIP)* is being supported by AHT and selected rural project regions benefit in the form of social infrastructure such as schools and health facilities as well as markets and rural roads.

Next, we present a range of challenging communal infrastructure projects AHT is currently implementing worldwide.



Rehabilitated Pumping Station, Wastewater Treatment Plant, Andijan, Uzbekistan

Pakistan: Refugees Affected Hosting Area (RAHA) Programme



Thomas Wiegand,
Interim Team Leader

AHT together with its partner NESPAK (Pakistan) is supporting the implementation of the *Refugees Affected Hosting Area (RAHA) Programme* mainly in Khyber Pakhtunkhwa (KP) province in Pakistan. Since 2009, this programme has been providing public infrastructure and livelihood support to hosting communities near refugee camps, or to those otherwise affected by Afghan refugees both directly or indirectly, in KP and three other Pakistani provinces. The programme is being operated by UNHCR together with the Commissionerate for Afghan Refugees (CAR) and is co-financed by the German government through KfW Development Bank.



Girls' Primary School in Dag Bahsud, Nowshera District: Extension Building from 2016 with 8 Classrooms, Sanitary Facilities and School Yard Improvement

Overall, RAHA has reached about 10.6 million beneficiaries and in 2015 it had completed over 3,400 projects, including construction and rehabilitation of schools, various health facilities, water supply systems, including

road infrastructure being newly furnished and equipped. KfW allocated about 5.7 Mio. € for the current third phase of the programme. AHT and NESPAK are providing technical expertise, organizational advice and

capacity strengthening to the RAHA units of UNHCR and CAR, line departments and NGOs.

Madagascar: Building Schools and Roads in Rural Madagascar

Over 80% of Madagascar's 23 million inhabitants live in rural areas. Decentralization and the strengthening of decentralized territorial communities can thus play a key role in the sustainable and economic development of the country.

In this context, the Malagasy government, promoted by the Local Development Fund (FDL) and with the support of German financial cooperation through KfW Development Bank, launched the *Programme for Inclusive Communal Development and Decentralization*

(PDCID) that is currently being implemented by AHT, together with its Malagasy partner GERCO Sarl.

The project aims to improve the access of the population to basic infrastructure and services and strengthen municipalities in terms of local governance. The project includes: (1) the construction and rehabilitation of priority communal and intercommunal infrastructure, including about 200 km of rural roads, and about 58 schools; (2) capacity building for municipal authorities in the areas of project management, communal management, infrastructure management and maintenance, public finance management, and; (3) strengthening the operational capacities of the Promoter (FDL) in the management and the implementation of the project and accompanying municipalities and inter-municipalities within the framework of decentralization.



Teaching Students in a Rehabilitated School



Jean-Louis Soille,
Team Leader

Egypt: Delegated Community Management for Wastewater Infrastructure



Rainer Tump,
Team Leader

In December 2013, AHT together with its national partner NSCE, started the *Community Development and Capacity Building Component* of the World Bank *Integrated Sanitation and Sewerage Infrastructure Project (ISSIP-1)* for the Holding Company for Water and Wastewater (HCWW). ISSIP-1 focused on the construction of three centralized and 14 decentralized sanitation systems in the Nile delta. *The Community Development and Capacity Building Component* introduced the concept of *Delegated Community Management* for the operation of wastewater infrastructure. Based on the *Demand Responsiveness Approach* and six main criteria, 30 villages with a total population of 32,000 people with a high demand for improved sanitation, were selected. Members of the Community Development Associations and the Water Companies on Governorate level were trained on technical, financial and managerial aspects. In addition, Team Leader Rainer Tump and his team developed and implemented hygiene promotion campaigns in all villages. The construction of the decentralized sanitation systems

with Anaerobic Baffled Reactors began in March 2015. The first systems started operation in March 2016.



Project Team with Project Director Ulrich Sammet, AHT (second row, far right) and Eng. Mounir Hosny, Director ISSIP PIU HCWW (second row, second to the right)

Senegal: Programme for Local Development and Good Governance (PDLBG)



Karolin Herpers,
Public Policy Expert

employment (AGETIP) in infrastructure investment. This support has focussed particularly on the Casamance Region which, following years of low level conflict for

Within the framework of the Senegalese "Programme for Local Development and Good Governance" (PDLBG), AHT and IDEV-ic (Senegal) have been supporting the Executive Agency for Public Interest Works Against Under-



Medina Maternity - Commune of Enampore

independence and subsequent peace negotiations, is now a test-case for an advanced decentralization policy.

The programme promotes (i) decentralized small-infrastructure investment, (ii) great-infrastructure investment in the Casamance

Region and (iii) capacity building for local officials in project management. AHT supports AGETIP with the selection of small-infrastructure projects, proposed by municipalities, and in its function as the Client (including developing tender documents, evaluating bids and designs and supervising works). To date close to 300 small-infrastructure projects (schools, market buildings etc.) have been realised. In the coming 2 years (2017-2018) seven rural roads and four dams will be build to increase rice harvest and improve access to markets in the region. The ultimate aim of these activities is to contribute to the population's well-being and consolidate peace in the region.

Uzbekistan: Rehabilitation and Expansion of Water Infrastructure

Uzbekistan's existing water supply and wastewater infrastructure was built during Soviet times and is in large parts not in working condition due to a lack of reinvestment. In order to develop safe, affordable, and more reliable piped water supply systems and to improve wastewater management, the Asian Development Bank is supporting the rehabilitation and limited expansion of water infrastructure with a loan of 140 million US \$. A range of cities are targeted in the Fergana Valley in south-eastern Uzbekistan, namely, Fergana, Margilan, Rishtan and Andijan.

AHT has formed a consortium with two Uzbek partners, Uzbekkomunalloiyhakurilish LLC and UzGIP LLC, and is implementing the project by preparing a detailed engineering design and bidding documents for water and wastewater facilities. This includes water intake structures, water transmission facilities, storage tanks, pumping stations, chlorination facilities and distribution networks. Furthermore, it will ensure individual metered service connections

and office buildings for each subproject. All treatment steps of the wastewater treatment plant in Andijan City (110,000 m³/d) have been rehabilitated and refurbished. The construction of the planned measures is currently ongoing while the consortium supports the construction supervision.

Ulrich Sammet, Project Director



Rehabilitation of Primary Settling Tanks, Andijan, Uzbekistan

Jordan: Concept Study for Improved Solid Waste Management in Amman



Paolo Facco,
Waste and Wastewater
Engineer

AHT, as part of a consortium led by CDM, is providing services to support the Greater Amman Municipality (GAM) in identifying and preparing investments for different resource recovery strategies and with the development of a training center.

To this end a review of the current situation and the associated boundary conditions will be carried out, analyzing which recycling markets and market options are most suitable for the use of secondary raw materials.

AHT's expertise will assess the institutional and financial framework, evaluating the opportunity to develop a PPP (Public Private Partnership) model for waste management and to involve the informal sector in future recycling activities.

The key outcome of the project will be an investment programme to finance facilities and equipment that minimizes the



Al-Ghabawi Landfill, Amman

quantity of unsorted landfilled waste, promotes resource recovery and mitigates greenhouse gas emissions whilst being financially sustainable. The project is co-financed by the German Development

Cooperation (BMZ) through KfW Development Bank.

In November 2016 AHT organized a one-week Study Tour with a delegation from GAM in Germany (see last page).

Palestinian Territories: A Waste Information System (WIS) for Solid Waste Management

The Joint Service Council for Solid Waste Management – Ramallah and Al Bireh Governorate (JSC), which represents 68 Local Government Units (LGUs), received financial, technical and material support from the German Government through KfW Development Bank. The objective of the programme is the environmentally and hygienically sound disposal of domestic waste, including the construction of a centralized Sanitary Landfill (SLF), a system of several Transfer Stations (TS) and Long Distance Transportation (LDT) from the TS to the SLF. AHT is implementing the *Accompanying Measures* supporting the JSC in the areas of organizational and institutional development, financial management and planning for pilot projects.

data transfer at the weighbridges of Transfer Stations, the future SLF and a tracking system for vehicles, as well as through links

to the accounting and billing systems in JSC headquarters.

Ulrich Sammet, Project Director

One particular tool being developed by AHT is a web-based Waste Information System (WIS), which records waste flow activities, and stores and analyses data on waste by source and by facility. The WIS will be used to produce standardized reports and evaluations for operational management, and will facilitate the proper tracking of waste streams, ensuring proper billing. This will be guaranteed using interfaces for automatic

The screenshot displays the WIS interface for 'Sanitary Landfill'. It includes a sidebar with navigation options like 'HOME', 'ABOUT', 'CONTACT', 'REPORTS', 'ADMINISTRATIVE FUNCTIONS', 'WASTE PARAMETERS', and 'WIS'. The main content area is divided into several sections:

- Sanitary Landfill Details:** Form fields for Name (SLF - Sanitary Landfill), Address, Phone, Email, Location, and Permitted working hours (Morning, Evening, Night).
- Geography of Transfer Station:** Fields for Area (km²), Area (ha), and Area (m²).
- Transfer Station Monitoring:** A table for 'Transfer Station Monitoring' with columns for Date, Area, and Area (m²).
- Waste Flow Monitoring:** A table for 'Waste Flow Monitoring' with columns for Date, Location, Parameter, Value, and Unit.
- Waste Flow Summary:** A table for 'Waste Flow Summary' with columns for Date, Starting time, and Ending time.
- Total Values (QND):** A section for 'Total Values (QND)' with a table for 'Waste Flow Summary'.

Screenshot of the Web-Based Waste Information System (WIS)

News from the Russian Companies of the AHT Group

International Conference on Climate, Soil Fertility and Agrotechnology



At the international *Climate, Soil Fertility and Agrotechnology* conference on May 15th-16th 2016, organized by the Russian National Movement for Conservation Agriculture, the state of the art of sustainable agricultural technologies were presented and discussed. The main focus of the conference lay on solving economic and ecological problems and the potential of using different instruments for the preservation of soil fertility and agricultural sustainability despite increasing climatic difficulties. 300 participants from 12 regions including farmers, representatives from industry, academia and the private sector, and students from agricultural academies and technical universities from the Volga region. The

conference was opened by the deputy Agricultural Minister of the Russian Federation, Jevgenij Gromyko. In his welcome address he underlined the necessity of having an open dialogue between agricultural producers, producers of agricultural machines, producers of pesticides and representatives from the private sector.

The conference was co-organized by the Russian-German Forum, the *Petersburg Dialogue*, the Ministry of Agriculture of the Russian Federation, the Chamber of Commerce and Industry of the Russian Federation, the German VDMA (Mechanical Engineering Industry Association), the Agrarian Committee of the Association for European Business, *Rosagrolasing*, ACCAGROS, in conjunction with numerous NGOs and representatives from the private sector.

Ms Liudmila Orlova, the President of the National Movement Conservation Agriculture underlined the relevance of the event by stating that the preservation of soil fertility and increasing agricultural productivity is a major challenge for private business, academia and political sphere and therefore they have decided to organizing this conference again in the years to come.



Liudmila Orlova, President of the National Movement Conservation Agriculture

Farm and Field Day

On the second day of the conference, a farm and field day was organized on the premises of Orlovka – AIC Ltd. This was the first time a technical exhibition of agricultural machines and machines for conservation land management has taken place at Orlovka. A range of training and informational events were also organized. The most interesting aspect for the participants was the practical presentation of the supply chain surrounding the transportation and storage of liquid fertiliser, making it possible to store this form of fertiliser next to fields.

Participants were able to visit the facilities of AO Eurotehnika and Pegas-Agro Ltd., which produce agricultural machines.



Orlovka – AIC Field Day



Orlovka – AIC Field Day Exhibition from Above

Harvest 2016

The weather conditions on Orlovka – AIC have been particularly unfavourable in 2016. Excessive rainfall during the planting season meant seeding could only begin in mid-May. This was followed by an exceptionally dry growing season, with most fields only receiving two good rainfall events over a 90-day period. The yields were low and the total grain harvest

amounted to 1,000 tons, which is 30% of the total planned. The oil crop yield was slightly better at 1,350 tons, or 75% of the planned volume for 2016. The total potato harvest was equal to that of the previous year. These planning volumes for expected yields are fixed at 90% of average yields for the preceding years.

The severe drought reduced the yields

compared to the average yields for preceding years as follows: corn – 75%, summer wheat (durum) – 65%, sunflowers – 40%, soybeans – 25%, irrigated crops – 20%.

Study Tour with a Jordanian Delegation from the Greater Amman Municipality (GAM)



Delegation at RDF Production Plant in Paderborn (in the middle the GAM City Manager Eng. O. El Louzi)

In November 2016 AHT, in cooperation with CREED (Center for Research, Education and Demonstration in Waste Management), organized a one-week Study Tour for a delegation of 10 staff members from the Greater Amman Municipality (GAM) in Jordan, visiting waste treatment and recycling facilities in Minden-Lübbecke District, Porta Westfalica, Paderborn, Hannover and Berlin. The

Study Tour started in Frankfurt a. M. at the KfW Headquarter, with an overview of German Development Cooperation in Solid Waste Management (SWM) in developing countries. Amongst others, the delegation visited Pohlsche Heide SWM Center in Minden-Lübbecke District where the participants had the possibility to see innovative Mechanical and Biological Treatment (MBT),

biogas and composting plants. They were then introduced to the German expertise on SWM by Prof. K. Fricke (TU Braunschweig) and Dr. K-H. Striegel. The study tour concluded with a visit to the incineration plant of BSR (local municipal SWM company) in Berlin.

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