PIN WASH OVERVIEW

UKRAINE – 2024/2025

ABSTRACT

Sustainable and environment friendly solutions, focusing on renovating the infrastructure in a way that enhances the efficiency and quality, are crucial in addressing the urgent needs and laying down the foundation for recovery…In emergencies and crises, ensuring access to clean water, adequate sanitation, district heating, and proper hygiene practices is paramount for the health, dignity, and well-being of affected populations.

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PIN WASH OVERVIEW – UKRAINE

1. INTRODUCTION:

In emergency and crisis settings, ensuring access to safe water, adequate sanitation, district heating, and essential hygiene practices is fundamental to upholding basic human rights, particularly the right to access water, and has a significant impact on the health, dignity, and overall well-being of affected populations. When restoring access to WASH services and supplies, it is essential to prioritize **sustainable and environmentally conscious solutions** that focus on renovating the infrastructure to improve both efficiency and quality. This approach is essential to meet urgent humanitarian needs while laying down the foundation for long-term recovery.

The combination of rapid short-term response and the rehabilitation of cold/hot water and sanitation infrastructure is vital to **promote equitable and cost-effective access** to WASH services and supplies for crisis-affected communities. Humanitarian organizations play a critical role in providing rapid and life-saving WASH services and supplies, and offering long-term solutions, that support re-establishing dignified living conditions and protecting the fundamental rights of affected communities. Our WASH program, implemented by a multidisciplinary team of skilled professionals, adopts a **systematic and integrated approach** to deliver effective and resilient solutions tailored to WASH needs in the Ukrainian context.

2. Context:

WASH is one of the key sectors under stress due to constant damage to critical infrastructure. It is estimated that **8.5 million people** are in need of clean and dignified WASH services (HNRP 2025). Among the affected population, 41% have been classified as severe, and 9% living in frontline/hard-to-reach areas are considered extreme.

Exposed to constant safety threats and other protection risks, Eastern and Southern Ukraine face the most acute humanitarian needs, with more than two-thirds of the population living close to the frontline and Russian border having extreme levels of unmet needs. There is significant damage to critical infrastructure, including both energy and WASH infrastructure. According to RDNA4, approximately **US$ 0.7 billion in damages to WASH infrastructure occurred between December 2023 and December 2024**, bringing the total to US$ 6.4 billion since February 2022, one of the most stark examples being the destruction of the Kakhovka Dam in Kherson oblast in June 2023. In addition to energy shortages (**in Q1 & Q2 of 2024 Ukraine lost 30-40% of its energy generation capacity** – UNDP), old and worn-out infrastructure, and overstretched capacities of local authorities have a major impact on the access of the affected population to WASH services (**water, sanitation, and district heating**).

Such WASH service shortages, combined with rising costs and reduced incomes, result in decreased access for the affected population to essential hygiene items and reliance on unsafe alternatives. Those with mobility issues due to age, disability and with underlying health conditions face greater health risks. According to HNRP 2024, in the face of rising costs and decreasing revenues, there is a considerable risk of de-prioritization of basic hygiene items necessary for health, dignity, and well-being.

3. People In Need:

People in Need (PIN) is an international NGO with a proven track record of providing humanitarian assistance worldwide, including in the Middle East, Asia, Africa, and Europe, while supporting development activities and human rights. PIN has been operating in Ukraine since 2003, notably expandingits response in the Eastern part of Ukraine since the conflict erupted in 2014. Since 2022, PIN has expandedits operations from two Eastern regions, Luhansk and Donetsk to the entire country, with 10 offices and astaff of 365 members.

Through its network of00 local community organisations and partners, PIN is present in almost every oblast and has implemented a range of multi-sectoral interventions. Between 2022 and early 2024, PIN has assisted 1,782,914 people..

PIN's current focus (2023-2025) in Ukraine evolves around 3 pillarss: I) Emergency preparedness and response, II) Ensuring basic services and rights and III) Social cohesion, integration and inclusive governance.
with 32 years of experience globally, People in Need has implemented relief and development aid programmes in more than 40 countries.
PIN is active in several sectors and Co/Lead of clusters and Technical Working Groups as well as being a SAG member for several sectors.

4. Overview of WASH Program at PIN Ukraine:

Operational Geographical Area:

PIN's WASH interventions began in 2014, WASH activities and approaches were aligned with emerging needs and adapting to contextual changes. Briefly, infrastructure-related interventions have primarily focused on the eastern, southern, and parts of the northern regions (currently including **Sumy, Kharkiv, Dnipro, Donetsk, Zaporizhzhia, Kherson, and Mykolayiv**). Emergency WASH supply interventions, have been implemented almost across the entire country, responding to the movement of affected populations' needs and displacements.

Scale and Experience:

PIN has managed a diverse portfolio of internal, semi-governmental, and institutional funding (for 2024/2025, this includes **BHA, FPI,, UHF, ECHO, MFA, SV, and internal flexible funding)(including raised through individual giving in Czechia)**. PIN has led large-scale responses and infrastructure rehabilitations directly and through partnerships, collaborating with 46 national WASH implementation partners between 2023 and 2025. PIN is a Strategic Advisory Group **(SAG)** member under the WASH cluster, PIN is **Co-Leading the Market-Based Programming Technical Working Group** (TWiG), PIN -with UNICEF- is **Co-Leading the Renewable Energy TWiG** under the WASH cluster, fostering the collaboration and experience sharing among WASH cluster members to promote and advocate for renewable energy solutions and cash and voucher modalities for WASH. PIN field engineers are experienced in various technical aspects and sub-sectors. The staff stabilization approach has helped PIN retain its engineers since 2016 in the country, supported by country-based Technical Leads under the Program Quality Department and HQ sectoral technical advisers.

5. Areas Of WASH Programming (Activities and Sub-Sectors):

I- WASH Infrastructure :

A- Water Supply System:

This aims to restore access to water for people via a **sustainable and dignified** option like the pipelined system. It includes rehabilitation of the **water network** and **stations** (pumping/boosting), water tanks/towers, chlorination for drinking water, and operation and maintenance materials. In addition, PIN provides water **purification/treatment** for drinking (**de/centralized**), including the adjustment and maintenance of the scheme at centralized water purification stations, like water **pumps**, controlling cabinet, **pipelines**, filtration materials, **laboratory equipment**, operation materials, and spare parts for the station itself. Also, this covers low-scale (decentralized) water purification points for drinking like **reverse osmosis**, ultraviolet, and chlorination systems.
Acknowledging the importance of sustainable WASH services, PIN allocated approx. 2 M$ budget for this type of intervention for 2025 (including sanitation systems) under several donors. PIN also, establishes **renewable** and backup **energy** systems for WASH infrastructure, including hybrid **off/on-grid** smart systems, including **solar** or **solar+wind** systems.

B- Sanitation Systems:

This includes the rehabilitation and construction of the **sewage network and stations (lifting/boosting)** to assure proper access to sewage service and transportation of sewage to a **wastewater treatment plant** or safe disposal point. In addition to support the wastewater treatment plants to enhance the sewage treatment, including provision of pumps, controlling cabinets, compressors, blowers, laboratory equipment, and rehabilitation or construction of treatment structures like retention champers, gravel/sand filters, and septic tank, plus **piloting decentralized treatment** like ABR- Anaerobic Baffled Reactor, UASB-Upflow Anaerobic Sludge Blanket etc.

As an example, PIN supported a large-scale re-construction at **Mykolaiv wastewater treatment station** that serves approx. **300,000 thousand people** in the city.

C- District Heating Rehabilitation:

PIN is one of the few active members in the district heating **Technical Working Group (DH-TWiG)** under the WASH Cluster, leading one of the largest district heating support initiatives under the humanitarian sector (excluding those led by governmental or development actors). PIN active budget for district heating is approx. 3.5 M$, covering all frontline oblasts in East, South, and North. Through this component, PIN aims to **ensure proper access to heating** for affected people at both **communal** (residential areas and buildings) and **institutional** levels (schools, hospitals, social centers, elderly care centers). Reliable access to heating is essential for institutions to maintain multi-sectoral services during the winter. This component also **strengthens community resilience against harsh winters**, potentially reducing the need for household-level rapid winterization support.

With funding from various sources , PIN has ongoing district heating rehabilitation interventions across five oblasts. These include support for heat generation (boiler houses, **cogeneration** units) and distribution (networks), as well as **decentralization** of systems to enhance resilience against attacks. In some cases, cogeneration support is provided too. PIN also assists service providers in overcoming energy shortages by establishing and supporting **renewable** and **backup energy solutions**, as detailed under second III.

II- Rapid Response Mechanism (RRM) :

A- Emergency Water Distribution:

This includes water delivery and distribution via **bottled water/jerrycans** and **water trucking**, aiming to ensure immediate access to water for affected populations, particularly during shock events (displacements or severe attacks on water supply systems). These efforts are conducted directly and through a **network of local partners and actors (e.g. local government) to reach hard-to-reach areas** near the frontline.

Where possible, this approach serves as a temporary solution until infrastructure is rehabilitated and functional in accessible areas affected by attacks. In adddition, PIN may provide water trucking equipment and storage items under this practice where the local authorities/actors can carry out water trucking by themselves.

B- Hygiene Kits Distibution (In-Kind):

Through a comprehensive range of hygiene kit options, PIN ensures access to essential hygiene materials for the most vulnerable groups among affected populations. This includes specialized kits for **People with Special Needs (PSN)**, **family kits**, and **individual kits** for people in transit. PIN has established a framework agreement with hygiene kit suppliers, allowing for the timely procurement of supplies. Additionally, PIN maintains a stock of kits in the field for immediate response when and where needed.

C- Cash Voucher Assistance for Hygiene (CVA-H):

CVA-H or Market-Based Programming (MBP) offers beneficiaries a more **dignified choice regarding the quality, type, and quantity of hygiene items according to their preferences**. Where markets are functional and accessible for affected communities, this modality is crucial for vulnerable groups, including Persons with Specific Needs (PSN).CVA/MBP is more cost-efficient than in-kind, as it saves operational costs, and it contributes to the recovery of local markets, thereby enhancing local community resilience.

PIN co-leads on MBP TWiG since the establishment of this initiative. In collaboration with the WASH cluster, **PIN led the effort to develop the first MBP guidance and toolkits on the WASH cluster level (here),** as well as exchanging the experience and lessons learned between actors who piloted CVA.

PIN piloted this activity under several donors **(BHA and SV)** and transferred the knowledge and best practices among actors at the cluster through its core role at the MBP TWiG.

III- Innovation, and replicating new technology/approaches:

A- Renewable and Back-Up Energy for Public Service Facilities and Institutions:

This component aligns with PIN's global strategy, specifically with **Pillar 3: Climate Change Mitigation and Resilience**. PIN Ukraine was one of the first NGOs to pilot solar power plants for **water and wastewater stations**, later expanding this approach to district heating systems and **public institutions** such as **schools**, **hospitals**, **social centers**, and IDP collective/transitional centers. PIN has completed and ongoing interventions to establish renewable energy systems, including solar and hybrid solar/wind solutions. The number of completed systems by Q1 2025 reached 12, with capacity ranging between 15 and 55 KWh. All systems are hybrid (AC- grid/generator and DC - solar/wind) and equipped with smart off-grid inverters. PIN's 2025 budget for this activity is approx. 1 M$ under varied donors This component offers multiple advantages, such as enhancing the sustainability of public services as it is **renewable, and reducing operational costs** (providing nearly free energy) and acting as a critical backup power source - especially for systems with battery storage - which is crucial during the current energy shortages in the country. Additionally, it has a significant positive impact on the environment by reducing greenhouse gas emissions associated with fuel-based energy sources.

B- Water Quality Testing and Treatment:

PIN supports laboratories and relevant actors in enhancing **water quality testing and surveillance** and promotes coordination and collaboration on water quality research and data management. PIN has supported several initiatives to improve **water quality assurance**, including upgrades to **water treatment systems** with more advanced, automated equipment.

This component is aligned with PIN's advocacy efforts, such as the roundtable on water quality and sustainability held in Brussels in April 2024, which PIN hopes will lay the foundation for larger-scale initiatives, including water resources management at sub-national and national levels.

C- Sustainable Solid Waste Management and Recycling:

As a part of PIN **environmental commitments**, PIN introduced this activity as a complementarity to other WASH activities. This aims to **reduce the waste generation** and **support recycling** in all targeted areas, recognising the potential extra waste generated due to PIN's activities, in order to minimize our carbon footprint. PIN's Budget for this activity is approx. 0.5 M$ aiming to cover 10 communities. This offers a **community-based and integrated** approach by supporting **solid waste management utilities** with both materials and **capacity building**, to support a practical shift to more sustainable waste management that ensures **better living conditions** in cities and **better ecosystem protection.**

6. General considerations:

When designing new WASH interventions, PIN applies standardized methods to measure progress and impact. The following approaches are applied:

A- Sharing Knowledge and Capacity Exchange:

Theknowledge required for **sustainable management**, and operation and maintenance of the project should be **transferred to local stakeholders through training and workshops**. The knowledge gained through innovation and pilots should be transferred to a wider group including other actors. PIN believes in collaboration with other humanitarian actors in line with the **Humanitarian Core Standards.** PIN co-lead two technical working groups under the WASH cluster **(Market-Based Programming TWiG and Renewable energy TWiG),** fostering efforts and offering platforms for coordination and sharing experience among WASH partners.

B- Integration Approach:

Wherever feasible, PIN emphasizes synergy and **collaboration internally** with other programs, prioritizing locations where PIN is currently active. WASH efforts are connected to shelter (linking rehabilitated houses to public services), recovery, education, and food security. Moreover, mainstreaming protection and focusing on marginalized groups are critical aspects of WASH. Ensuring access to sanitation and hygiene significantly impacts the health and dignity of the targeted population. This is coupled with **external coordination** with other actors to ensure complementarity among NGOs.

C- Knowledge, Learning and Development Platform:

PIN has its own **knowledge, learning, and development platform** where **global technical advisers** and specialists are connected to each other and with the country programs, ensuring a smooth exchange of knowledge across different country programs. For example, under **climate change mitigation** and resilience, PIN has implemented large-scale renewable energy interventions in **Syria**, where **more than two million watts** were installed to support WASH facilities and public institutions. Additionally, PIN has diverse experience in different countries (Ethiopia, DRC), including **biogas generation** for energy and lightning through **wastewater treatment** and **biological solid waste digestion**, as well as wastewater treatment and re-use for irrigation. Regular meetings and collaboration take place between country programs and sectoral advisers, keeping country programs updated on new approaches and global best practices.

Solar power plant for water station in another CP