



15.10.2025

Description of the project of arrangement/conversion of storage facilities from attacks on the civilian population from military attacks (later from natural disasters)

Currently, there is a very urgent need in Ukraine to organize shelter for the civilian population from enemy missile, drone and artillery attacks. The unpredictability, inhuman illogicality of the actions of the aggressor party pose a threat to people's lives and health every day. The civilian population is especially vulnerable, for whose needs protective structures were created.

Unfortunately, the scale of the disaster and the fact that it is even possible - in our modern age – was difficult to predict. Existing facilities (created as storage facilities under the USSR, not equipped at all with working engineering life support systems, or outdated working inefficiently – ventilation and filter equipment (according to expert evaluations of such storage facilities from 70 to 85%). This poses a direct additional threat to people's lives and health - shelters without ventilation and filter equipment are "graveyards" if ugly gas, smoke, combat poisons, chemicals, radiation, biological substances get into the storage, everyone who is in this shelter can stay there. The stay of people in a closed room, without the threat of loss of health and life - must be provided with equipment that filters and supplies the necessary, according to regulations, air quantity – is an axiom.

The Institute of Air and Water Quality, in accordance with its statutory tasks and goals, has developed a project and algorithm of practical actions for the arrangement/conversion of storage facilities for the civilian population. Ways to optimally solve this problem in a shorter time have been found. On the basis of expert research and consultations, the best options for solutions and executors of the relevant specialty were chosen. Design was carried out in accordance with modern standards and requirements, work was done to determine the optimal cost of manufacturing and installing the necessary equipment, taking into account warranty and current maintenance. Consultations were held and approvals were obtained in the promotion and support of state administrations and territorial communities for the implementation of pilot and further projects.

Unfortunately, there are currently certain resource limitations in Ukraine, and therefore the Institute, with gratitude and respect, guaranteed responsibility and reporting, counts on assistance and assistance in the arrangement of storage facilities - financing works on the manufacture and installation of modern, according to existing quality and compliance standards, ventilation and filter equipment.

We will calculate to equip up to 50 storage facilities that can accommodate 350-450 people, and in case of critical need 600-700 – each, within 4 to 8 weeks. And they are all at significant risk for attacks. Thus, as a result of support in the implementation of the – project, reliable protection without threat to life will receive from 17,500 to 35,000 -126,000 people.

This will be a joint work, the results of which can be proud!

The name of the initiative:

“Restoring the functionality and safety of civilian shelters by quickly equipping with filter ventilation systems”

(Initiative of the Ukrainian Institute of air and water quality)



**Ukrainian Institute
of Air and Water Quality**

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Project application for financing

“Restoring the functionality and safety of civilian shelters by quickly equipping with filter ventilation systems”

Initiator and coordinator of the project:

**Ukrainian Institute of air and water quality
(NGO, USREOU 45872200)**

Total project budget: 187 228 480 UAH (4 566 000

USD) * estimated rate: 1 USD = 41 UAH. All amounts are indicated in UAH with VAT.*

The name of the initiative:

“Restoring the functionality and safety of civilian shelters by quickly equipping with filter ventilation systems”

(Initiative of the Ukrainian Institute of air and water quality)

1. The initiator and goal

The Ukrainian air and water quality Institute is a scientific and non-governmental organization established de facto in 2016 and registered accordingly in March 2025 with the participation of scientists of the National Academy of Sciences of Ukraine and practitioners. --

The Institute is focused on the implementation of technological solutions for human life safety and ensuring the quality of air and water in everyday life.

The project is the Institute’s own initiative to **modernize and restore the functionality of civilian shelters** in communities threatened by missile and artillery attacks.

The main goal is to **urgently provide safe conditions for people to stay, save the life and health of the civilian population**, using simple but technologically advanced solutions that do not require capital construction work.

2. Justification of relevance

According to expert estimates of official professional institutions, **more than 70 % of existing storages** in Ukraine have non-working or outdated engineering life support systems.

Without proper filtration and ventilation, shelters **are turned into traps**, because when the smoke, carbon monoxide or toxic substances penetrate, people inside can die or get irreparable negative impact on their health – from oxygen starvation.

Particularly vulnerable are **children, the elderly and people with chronic diseases**, for which lack of oxygen is a critical danger not only physically, but also psychologically and can have irreparable consequences.

A reliable system of filtration and air supply is not just technical comfort, but a **condition for saving life, health and stability** of the psycho-emotional state in a crisis situation.

At the same time, equipped shelters will be **useful in peacetime** as a place of collective security during natural disasters, man-made incidents or emergency weather events.

3. The decision proposed by the Institute

The Institute conducted research, developed a unique model of rapid conversion of shelters and determined the technical solution and selected among the best manufacturers of certified ventilation and filter equipment that meet the high requirements of operation, as well as:

- Complies with the norms of SES of Ukraine;

- can be installed without changing the structure of the shelter;
- has a valid certificate of conformity;
- able to function both in normal mode and with power outages (autonomous air supply).

A typical filter-ventilation module is developed, ready for production and installation, which provides the life of **350 – 450 people in standard mode and up to 600–700 people in a short period of increased load.**

The Institute organizes a full cycle of activities for the implementation of the project, coordinates all stages: From technical justification and decision-making to the conversion of the shelter and to the documentary commissioning of the object.

4. Model of project operation

- The Institute concludes memoranda with territorial communities, together with them determines priority for urgent re-equipment of shelter.
- Together with the selected technical partner, defects, preparation of technical documentation, production and installation of the system are carried out.
- After testing, the SES issues an act of commissioning.
- The owner of the shelter receives the passport of the object, a warranty package and maintenance obligations.
- The Institute carries out control, audit and reporting to the donor.

This model is based on the principles of **efficiency, accountability and documentary transparency.**

5. Scale and expected effect

Stage: (1 to 3 months each)

1. Stage 1 – 50 shelters

2. Stage 2 – 65 shelters

3. Stage 3 – 65 shelters

In total, **there are 180 shelters**, each of which will be able to find protection for **up to 700 people in peak conditions, which is about 35 000 - 126 000 people.**

Length of stage — **2–3 months.** The launch of the next block depends on the successful report of the Institute for the previous stage.

6. Budget framework

- **Full cost of production, installation and commissioning of one set “turnkey”:**
979 560 UAH (≈ 23 889 USD, including VAT)
- **Budget 3 Stages (180 shelters):** ≈ 176,3 million UAN (≈ 4,3 million USD)
- **Operational support, monitoring, audit of the Institute:** ≈ 10.9 million UAH (≈ 266 thousand USD)

TOTAL PROJECT BUDGET

The total budget of the project is 187 228 480 UAH (4 566 000 USD) and consists of two main blocks:

- 1. Production and installation unit (180 shelters): 176 320 800 UAH (4 300 000 USD)**
- 2. Support, management and audit by the Institute: 10 907 680 UAH (266 000 USD)**

3. DETAILS OF THE BUDGET

3.1. Production and installation unit (turnkey equipment and operation)

The total cost of equipping one shelter is 979 560 UAH (23 889 USD).

At the cost of protecting one person in a peak mode of about 1 400 UAH (34 USD), the project demonstrates high cost efficiency compared to similar humanitarian initiatives.

This amount includes all costs for one set of "turnkey":

- Production of certified filtration and ventilation complex -- 276 000 UAH (6 732 USD)
- Filter elements, cartridges, components -- 204 000 UAH (4 976 USD)
- Ventilation automation, power supply -- 92 000 UAH (2 244 USD)
- Logistics and transportation -- 52 000 UAH (1 268 USD)
- Installation, commissioning, testing -- 197 000 UAH (4 805 USD)
- Project documentation, coordination with SES, training package -- 64 000 UAH (1 561 USD)
- Warranty package and service (12 months) -- 25 560 UAH (623 USD)
- Tools, hire of special equipment -- 13 000 UAH (317 USD)
- Administrative expenses of the contractor -- 34 000 UAH (829 USD)
- Contract reserve (3%) -- 29 350 UAN (716 USD)

Distribution of costs by stages:

- Stage 1 (50 shelters): 48 978 000 UAN (1 194 000 USD)
- Stage 2 (65 shelters): 63 671 400 UAN (1 553 000 USD)
- Stage 3 (65 shelters): 63 671 400 UAN (1 553 000 USD)
- PA3OM: 176 320 800 UAN (4 300 000 USD)

3.2. Budget support, management and audit by the Institute

This block covers the full operational, financial and expert support of the project by the team of the Institute for 12 months. Total amount: 10 907 680 UAN (266 000 USD).

Details of monthly expenses (excluding bank commissions):

- Staff (gross salary, 9 official units) -- 420 000 UAH (10 244 USD)
- Single Social contribution (USC 22% on the payroll) -- 92 400 UAH (2 254 USD)
- Expert services (outsourcing, engineering reviews) -- 40 000 UAH (976 USD)
- Business trip (field inspections, monitoring) -- 45 000 UAH (1 098 USD)
- Operating expenses (office, it, communication, insurance, others) -- 110 000 UAH (2 683 USD)
- M&E/JEL (monitoring and evaluation) -- 15 000 UAN (366 USD)
- Financial services and audit -- 20 000 UAH (488 USD)
- Operating reserve (6%) -- 44 340 UAN (1 081 USD)
- Monthly summary: 742 400 UAH (18 110 USD)

Annual Summary (12 months): 8 908 800 UAH (217 288 USD)

Additionally: Banking fees for the transit of funds

- Rate: 1% of the amount of transit payments to the contractor.
- Estimated amount: 890 000 UAH (21 700 USD) - is calculated individually ⁶

on the fact of payments.

- ***Note: The Institute is optimizing to reduce the actual commission to 0.2-0.6%. The economy remains in the project***

Total sum of the support unit: 10 907 680 UAH (266 000 USD)

4. FINANCIAL LOGISTICS AND REPORTING

- 1. Stage-by-stage financing: Funds for each next stage are allocated after the full report of the Institute (technical and financial) for the previous stage. *Stage 2 funding is only available after successful commissioning and reporting for all 50 phase 1 facilities, which guarantees full donor control at every step***

- **Total project implementation period: 9-12 months**
- **Stage-by-stage financing and deadlines:**

Stage 1 (50 shelters): 2-3 months from the date of receipt of funding.

Stage 2 (65 shelters): 2-3 months. Start after a successful report.

Stage 3 (65 shelters): 2-3 months. Start after a successful report.

Note: The Institute has reasonable expectations for possible reduction of the total implementation period to 8-9 months, provided operational funding

- 2. Principle of payment: Payment to the contractor is made on the terms of 60% advance cost of work to maximize the process of preparation for production. Full payment is made only after the work, quality check and receipt of a full package of documents (acts, certificates, photo fixation).**
- 3. Transparency: All costs are confirmed by primary accounting documents and interim confirmation of the completed stages of work. The Institute provides multi-level financial control and quarterly and stage-by-stage independent audit.**
- 4. Role of the Institute: The Institute acts as a guarantor of the holistic, high-quality and transparent use of funds, taking full responsibility for the coordination, reporting to the donor and achieving the goals of the project.**

Total project budget: \approx 187 million UAH (\approx 4.56 million USD)

The cost of protecting one person in a peak mode is approximately 1 400 UAH (34 USD). The project demonstrates high cost efficiency compared to similar humanitarian initiatives.

7. The unique role of the Institute

The Institute is not just a coordinator, but **a carrier of expertise and a guarantor of quality:**

- provides a methodological and legal basis for implementation;
- guarantees certification and documentary introduction of all objects;
- performs independent monitoring and financial reporting;
- provides long-term operational support.

It is thanks to the scientific, organizational and expert resource of the Institute that the project is transformed from a purely technical into a systemic social solution.

Institutional capacity of the Institute

The Institute has been operating since 2016, bringing together scientists and experts in the field of protection of the right to use quality air and water and a comprehensive approach of the state, business and end consumers to monitor the quality of air and water and the implementation of responsible use programs. -

Legally, the Institute was registered in March 2025 as an independent non-profit organization.

The Institute has created a complete system of management procedures, internal policies and regulations that meet international standards of **good governance**:

Anti-corruption policy; policy of integrity; prevention of conflicts of interest; system of financial control and multi-level verification of payments; the mechanism of complaint; protection of consumer rights; protocol of public reporting.

The Institute has formed a map of interaction between departments, defined roles and responsibilities, operates a monitoring system for each stage of implementation. This ensures transparency, risk control and trust of international institutions.

8. Expected social effect

- **Saving lives and health up to 126 000 citizens** in high-risk areas.
- **Protect vulnerable groups** (children, elderly people, people with chronic diseases) from hypoxia, toxic effects and stress.
- **Formation of a national standard of “ready” shelter**, which can be scaled throughout the country.
- **Increase of trust and psychological stability of citizens** in crisis situations.
- **The possibility of using shelters as “multi-risk security networks”** in peacetime during natural disasters and other dangerous situations.

9. The final position.

The project of the Institute is an example of a practical, fast and controlled solution for an immediate urgent solution to the issue of humanitarian protection of the population by bringing shelters to a state of functional capacity to protect life and health.

It is based on Ukrainian scientific development, has a clear algorithm of control and transparency, is documented in every action and creates a real field of security.

An investment in this project is a **direct investment in thousands of lives saved**, in a partnership model of trust between civil society, the community and international donors.

The initiator of the project is

“Ukrainian Institute of air and water quality”

Project leader - **Alexander Ishchenko**, Doctor of Economics, Professor, Head of the Institute

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