Technical Specifications

Project	Support to Nature Protected Areas in Ukraine", BMZ No.:2011.6612.3 and 2013.6588.1
Title	Procurement of rugged smartphones for monitoring work of rangers and research staff of protected areas
Short title	Rugged smartphones
Reference number	NT-2021-14-LCB-Rugged Smartphones

1. Type of Procurement

This procurement of goods will be conducted in 1 Lot.

Market research showed that the equipment to be procurement is not widely available on the Ukrainian market, particularly not in the required quantities. A common national competitive bidding process would therefore likely not result in a favorable number of bids from potential suppliers and the risk of a failed tender would be substantial. Therefore, this procurement will be conducted using **Limited Competitive Bidding,** which will maximize the likelihood of a successful procurement while maintaining a transparent procedure and high value for money.

This procurement is linked to the following sections of the project's Overall Procurement Plan:

Output 4. The administration and management of the national protected area management system (MENR) is strengthened.

SA.4.3. The ranger service of the protected areas sector in Ukraine is reformed and operates according to improved and upgraded standards

T.4.3.4. The components of the reform are implemented through targeted procurements

ST.4.3.4.2. Digital and mobile ranger activities monitoring schemes are elaborated, tested in pilot areas and (if successful) expanded

2. Context

Accurate and reliable monitoring systems are prerequisites for effective management of protected areas worldwide. In particular, data derived from biodiversity monitoring plays an important role for effective PA management as it provides essential information for guiding decision-making and allows for adaptive management as changes in biodiversity can be tracked over time. Without accurate and reliable monitoring data, assessing the effectiveness

of conservation measures tends to be error-prone and important conservation issues can more easily remain unnoticed for long periods of time.

Besides the monitoring of biodiversity, the specific monitoring of individual conservation measures is of high importance. This is particularly the case for law enforcement operations inside the protected areas aiming to prevent illegal activities such as timber extraction or poaching. As resources for law enforcement are generally limited, the resources that are available need to be allocated as efficiently as possible to allow for maximum effectiveness in deterring illegal activities.

To achieve both goals, protected areas worldwide rely on reliable monitoring data of biodiversity as well as of law enforcement activities. By using specialized hardware and software such as the free of charge Spatial Monitoring and Reporting Tool (SMART, https://smartconservationtools.org/), PA managers can obtain a reliable understanding of patrolling activities (efforts, spatial distribution, temporal distribution, etc.) as well as of illegal activities detected by the patrols (locations of detections, types of violations, etc.). Also, biodiversity monitoring data can be collected and centrally stored and analysed through SMART. This allows managers to optimize law enforcement over time and provides valuable indications regarding the trends of illegal activities inside the PAs while also allowing for the constant collection of biodiversity monitoring data.

This procurement follows an earlier procurement (of ten rugged smartphones) which was conducted as a Quick Start Measure in early 2021 (**QSM-2020-4-NAT-Rugged smartphones rangers**). The Quick Start Measure was conducted as a testing and pilot phase through which the use of the specialized rugged smartphones was to be tested by three selected target areas of the project. In particular, the objective of the testing phase was to assess the true utility of such smartphones in field conditions in the protected areas and for data collection using the SMART software (www.smartconservationtools.com). This also included an assessment of which functionalities of the smartphones were particularly useful and which were not, thus informing whether or not additional smartphones should be provided in large numbers across all target areas and what would be the best specifications of the phones for such a larger procurement.

For a period of three months, rangers and research staff of the three selected protected areas used the provided smartphones during field surveys and patrols and actively tested them by recording observation using the SMART software. Feedback from the users regarding this testing phase revealed that:

a) The GPS functionality of the smartphones is very high, providing accurate and reliable navigation in the field. The use of additional GPS devices becomes obsolete when having a smartphone.

b) The battery life of the smartphones is very long which is of great value for field work.

c) The smartphones have high ruggedness and are likely to remain fully functional for years despite the demanding field conditions.

d) The smartphone cameras provide high-quality pictures. This makes the use of additional digital pocket cameras for regular purposes of data collection (standard shots without optical zoom) obsolete.

e) The use of the SMART software on the phones works without any problems and so does the data collection.

f) The integrated radio capability of the smartphones was **not** found to be of major additional value. Using the radio functionality was found to strongly accelerate battery consumption and the distances of the radio signal were found to be short.

All in all, the smartphones were found to be of high functionality for the envisaged purposes. Only the integrated radio function was found to be of rather limited value.

These results lead to the conclusion that additional provision of rugged smartphones to cover all eight target areas and all relevant protected area staff would strongly increase the areas' monitoring and patrolling efficiency and effectiveness. Further important conclusions are:

a) Future smartphones to be procured should not include radio functionality due to its limited utility. This would likely lead to lower costs per smartphone and would increase the choices of brands and models to allow for highest value for money.

b) Procurements of other monitoring and field work devices such as GPS devices and digital pocket cameras can be severely minimized or fully omitted as the provided smartphones already cover these functions.

The implementation of the smartphones and the SMART software is being conducted in very close collaboration with a second project which is focusing on supporting a different set of protected areas in the Ukrainian Carpathians. The project is called "Conservation of highly valuable primeval and old-growth forests in selected national parks in the Ukrainian Carpathians". It is part of the International Climate Initiative (IKI) and supported by The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) with the project code 19_IV_086_UKR_A_Karpatenwälder. The implementing organization is Frankfurt Zoological Society. The target areas of both projects share a large number of commonalities, especially regarding the types of natural habitats that they conserve as well as their typical challenges and opportunities. In particular, they share very similar objectives regarding the strengthening of biodiversity monitoring capacities. For this reason, the two projects decided to collaborate to implement a congruent approach for supporting the monitoring development across all target areas. The partner project acts as the leading party regarding this activity. As such, the partner project is coordinating the technical aspects of the SMART implementation and is guiding the implementation process for all target areas, including those of the SNPA project.

Important changes of availability of rugged smartphones on the international markets:

In preparation of this procurement, further market research was conducted to assess the availability of rugged smartphones on the national and international markets. This revealed that the supplies of smartphone models with similar specifications as those tested in the pilot phase are currently severely limited. This means that such devices are currently not available in the required numbers and are very likely to remain unavailable for the foreseeable future. Therefore, an alternative model must be procured which is available on the market and which still meets all of the above-stated and crucial capabilities identified in the pilot phase (incl. high GPS functionality long battery life, very high ruggedness and water resistance, SMART compatibility, adequate camera functionality). The above-mentioned IKI-Project has already

procured and field-tested larger numbers of such an alternative smartphone model by the brand Blackview. Based on these tests, direct reports from experts of the IKI-Project indicate that the model fully meets all the needed criteria and that it is highly functional for the needed purposes. Based on this information, the SNPA project has decided to limit this procurement to specifically focus on this specific smartphone brand and model (details in section 4).

3. Objectives

Global objective

A contribution to the conservation of the biological diversity in Ukraine is delivered.

Specific objective

Through the availability of specialized rugged smartphones to the protected areas, their effectiveness and efficiency regarding biodiversity monitoring and patrolling are strengthened. This will lead to more robust and reliable monitoring and patrolling results which will form the basis for improving the management and conservation effectiveness of the areas.

In total, 189 smartphones are to be procured.

4. Specifications

Rugged Smartphones

Quantity: 189

Brand: Blackview

Model: BV4900 Pro 4GB/64GB

- Operating System: Android
- Battery capacity: 5580mAh
- Internal Storage: 64 GB
- RAM: 4 GB
- Ingress protection rating: IP68K
- GPS: GPS, A-GPS, GLONASS, BeiDou, Galileo
- Essential accessories: charger, cable USB

Note on the selection of this specific brand and model:

As mentioned above (Section 2), the selected model has shown to fully accomplish all the needed work requirements as reported by experts from the IKI-Project. Given that the SNPA project has the exact use-case for such smartphones, it is highly likely that this specific brand and model will also fulfil all the needed work requirements for the SNPA areas. The brand Blackview has for several years been among the world leaders in the production of rugged smartphones and has a long track record of producing high-quality devices. Furthermore, the selection of this specific model will not lead to higher expenditures. Rather, lower expenditures without a relevant loss of functionality are expected.

5. Environmental and Social Standards (ESS)

Potential environmental and social risks shall be management and minimized in this procurement through ensuring that the requirements of relevant ESSs are met.

Standards	**Relevant (yes/no)** If yes, specify: What are possible unintended negative outcomes?	**Measures to be taken to** a) reduce the likelihood of unintended negative outcomes occurring, b) mitigate negative implications in case unintended negative outcomes do occur
ESS1 Assessment and Management of Environmental and Social Risks and Impacts	Yes. If potential risks and negative outcomes are not identified, they may be harder to mitigate and likelihood that they may occur is increased.	Conduct assessment of risks and impacts and identify all relevant ESSs. Follow the measures identified for ESS 2-10 to reduce risks and mitigate negative outcomes.
ESS2 Labour and Working Conditions	No.	
ESS3 Resource Efficiency and Pollution Prevention and Management	Yes	The equipment to be purchased is specifically aimed at being of very high durability and long life cycles. This will reduce the risk of premature hardware failure and thus maximize resource efficiency.
ESS4: Community Health and Safety	No.	
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	No.	
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	No.	
ESS7: Indigenous Peoples	No.	
ESS8: Cultural Heritage	No.	
ESS9: Financial Intermediaries	No.	

ESS10: Stakeholder Engagement and Information Disclosure	No.	Extensive exchanges were conducted with the target areas in order to compile the list of types and quantities of monitoring equipment to be procured. This will ensure that the provided equipment serves the needs of the areas as much as possible and maximize their eventual use by the PA staff.

6. Delivery, Reception and Payment

Delivery:

The goods shall be delivered according to the terms of delivery DDP (Project Office: Shevchenko Str., 70, apt. 1, Lviv, 79039 Ukraine). **The prices should not include VAT**. AHT Group AG will provide the Registration Card to the supplier to be exempt from all taxes, customs duties and charges.

Reception:

The goods are to be delivered to the SNPA Project Office in Lviv. They will be distributed to the target areas separately by the SNPA project.

Payment:

100% payment for the goods will be conducted within ten (10) days after the delivery of the goods to the SNPA Project Office in Lviv.