

# CHALLENGE CALL FOR INNOVATIVE SOLUTIONS TO REDUCE AIR POLLUTION IN SERBIA AND IMPROVE AIR QUALITY

## SEPTEMBER 2020

### The Innovation Challenge

The United Nations Development Programme (UNDP) is dedicated to promoting innovation in resolving complex developmental issues. Innovation challenges are prized challenges organized with a view to soliciting innovative ideas and solutions to address development challenges, which cannot be achieved through traditional solicitation processes. The selected projects on innovation challenge calls could be offered awards, technical assistance and equity co-financing for developing of the bankable idea and its offer to commercial or development banks.

In the past three years, UNDP has organized complex and successful challenge calls mitigating climate change in urban areas, promoting open data, tackling COVID-19 and re-use of biowaste.

On this occasion, UNDP, UNICEF with the support of the World Health Organization (WHO)<sup>1</sup> solicit proposals which will have a clear objective that needs to be achieved but the manner in which it can be achieved is not known to UNDP or an easily accessible solution cannot be sourced through traditional commercial channels.

The present Innovation Challenge Call is geared towards tackling air pollution in Serbia, in the broadest sense, where innovators will have an opportunity to propose new ideas for urban areas in Serbia (though not necessarily completely new worldwide), in line with the description below.

### About Air Pollution

Exposure to air pollution has serious negative implications to human health, length and quality of life. Long-term exposure to air pollution is directly related to premature deaths, while short-term exposure increases mortality risk. According to the World Health Organization's (WHO) report<sup>2</sup> "*Health impact of ambient air pollution in Serbia: A call to Action*" published in 2019: "nearly 3600 premature deaths every year are attributable to exposure to fine particulate matter measuring  $\leq 2.5 \mu\text{m}$  (PM2.5) in 11 studied cities in Serbia". Measurement of air quality parameters for the period 2010-2015 showed levels of pollutants exceeding the values of the

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<sup>1</sup> "The World Health Organization is providing technical support to UNDP in the context Challenge Call for innovative solutions to tackle air pollution and improve air quality (the "Challenge"). The Challenge, the selection of ideas and projects as well as implementation of the awarded solutions are the sole responsibility of UNDP. In no event shall WHO assume any liability towards UNDP nor any third parties in relation to the Challenge, including without limitation towards the organizations having responded to, and/or having been selected, for the Challenge."

<sup>2</sup> WHO (2019) <http://www.euro.who.int/en/countries/serbia/publications/health-impact-of-ambient-air-pollution-in-serbia-a-call-to-action-2019>

WHO air quality guidelines, throughout Serbia. On the other, reduction of the air pollution brings measurable benefits. WHO's simulations demonstrate that improved air quality (reduced concentration of PM2.5) has major health benefits and carries potential to reduce air-pollution-related mortality.

Serbian Environment Protection Agency (SEPA) performs measurements of AQ in Serbia through its national monitoring network, collects the AQ data from local monitoring networks, and reports on the AQ. Data for 2018 show that the levels of air pollutants exceeded the limit values in a number of cities/municipalities, including: Valjevo, Uzice, Smederevo, Belgrade, Pancevo, Kosjeric, Kragujevac, Kraljevo, Bor, Novi Sad, Sremska Mitrovica, Subotica.

Children and young people are particularly vulnerable to the effects of air pollution. Air pollution threatens their survival, development, and physical and mental health – all of which are children's fundamental rights under the Convention on the Rights of the Child (CRC).

High frequency of exceeding the limit values for air pollutants and the detrimental effect of air pollution on health call for immediate action.

## **About Challenge**

In order to contribute to improving the quality of the air that we all breath, UNDP Serbia is soliciting legal entities to propose innovative ways of producing or procuring innovative products, technological solutions and new value chains related to the following **categories**:

1. Individual heating/combustion units (in households, public buildings) improved in terms of reduced emissions of pollutants, improved efficiency of energy-use, multifunctionality, etc.;
2. Devices, software or methods for air quality monitoring, data processing and publication of results, preferably in open data format.
3. Exceptionally novel and effective Air purifiers (individual or collective air purifying).
4. Other equipment or advanced processes that contribute to the reduction of air pollution from the following sectors: transport, agriculture, industry, utilities (communal hygiene of public spaces, waste management, etc).
5. Solutions focused on mitigating/reducing air pollution impact on children. This category also accepts individual proposals, and is particularly intended for young people, university students, and private sector. Solutions proposed under this category (no. 5) need to be aligned with Principles for Digital Development (<https://digitalprinciples.org>) adopted by UNICEF, including Open Source Principles (this does not apply to other categories no. 1-4).

Only proposals which are aligned with the local rules and regulations in Serbia, relevant technical standards and WHO recommendations, and which pass technical peer-review by independent peer reviewers, shall be deemed eligible.

## **The Challenge**

The United Nations Development Programme, in cooperation with UNICEF and WHO, is launching

***a Challenge for proposing new, innovative solutions or replicate solutions existing in other parts of the world, that improve the quality of ambient and indoor air.***

with a view to:

1. Produce, implement, procure or establish new value chains for individual heating/combustion units;
2. Produce, implement, procure or establish new value chains for devices, software or methods for air quality monitoring, data processing and distribution;
3. Produce, implement, procure or establish new value chains for exceptionally novel and effective air purification equipment. Existing value chains for air purifiers will not be taken into account;
4. Produce, implement, procure or establish new value chains for equipment or advanced processes that contribute to the reduction of air pollution from the following sectors: transport, agriculture, industry, utilities;
5. Produce, implement, procure or establish new value chains for solutions focused on mitigating/reducing air pollution impact on children.

should apply to this Challenge, in line with the application rules described below.

Legal entities with ideas and/or productive capacities, which could cost-efficiently produce above-mentioned products, or demonstrate new innovative value chains for acquiring or procuring these types of products under all five categories are encouraged to apply.

For the category 5 above, the individual applications will also be accepted: individuals that can produce, implement, procure or establish new value chains for solutions focused on mitigating/reducing air pollution impact on children are encouraged to apply under this category ONLY.

UNDP shall, jointly with the relevant national authorities and supported by WHO, verify and assess the application against the criteria described below. The selected projects would need to have clearly demonstrated financial needs – of the funds needed/lacking to be able to offer their products on the Serbian market.

The Selection Panel shall in its evaluation pay particular attention to the number of people who will benefit if the application is selected.

Winning solutions and teams will be promoted through UNDP Serbia and UNICEF's network of media contacts and social media channels.

The selected proposals, pending the availability of funding, could be offered:

1. Innovation prize award, for especially well thought-through and mature project idea;
2. Technical assistance to develop a good idea and find financing on financial or capital market;
3. Equity co-financing, for exceptionally well designed and prepared ideas, which require minimum engagement from UNDP and which are free from financial, environment or regulatory risk;

In addition to this, UNDP, supported by WHO, and UNICEF, will provide guidance and assistance for further development of the selected proposals, as appropriate, and promote the project outputs as examples of good practices.

## Who can apply?

- Eligible applicants are:
  - legal entities including but not limiting to:
    - Public companies;
    - Commercial organization/businesses (Ltd, entrepreneurs);
    - Research institutions;
    - Exceptionally competent or relevant civil society organizations.
  - under category 5, applications will be accepted also from individuals, besides all above mentioned categories of applicants.
- The applicant has to be registered in Serbia, according to national legislation, according to national legislation.
- Applicants can apply independently or in Consortia. If applying in Consortia, the Lead Applicant has to be clearly identified and has to be registered in Serbia, to be authorized to represent the Consortia and serve as the main point of contact throughout the application process. The lead applicant will also be the main recipient of the funds vis-à-vis project resources.
- There is no limitation as to how many proposals one legal entity can apply with or in how many consortia it can participate.

## What is considered an innovation?

- New technologies or new application of existing technological solutions (First-of its kind in Serbia);
- New/improved business models or processes in Serbia;
- New value chain in Serbia;
- Finding sustainable solutions which leads to long-lasting change;
- Solving social issues (gender equality, engagement or impact on marginalized groups, unemployment etc).

## Budget limitations

The selection and awards shall depend on the available funding,.. UNDP may offer some projects support in getting them ready for financing, in agreement with the project owner. UNDP will select as many projects which fit the criteria as funding allows. Ceilings for the individual grants are as follows:

<b>For the projects of the following investment value:</b>	<b>Individual grants per project</b>
Small project - up to USD 100,000	Up to USD 30,000, more in exceptional cases
Medium projects - USD 100,000 – USD 1 million	Up to USD 100,000, more in exceptional cases
Big projects - above USD 1 million	Up to USD 200,000, more in exceptional cases

Note: Regarding the category 5 of the challenge (solutions focused on mitigating/reducing air pollution impact on children), the solution cannot be “for profit” purposes.

## Process

Interested applicants shall submit the online application form with project proposal describing the innovative idea for evidence-based approaches, providing information on objectives, key activities, expected outputs and outcomes, and budget.

## **Selection**

All eligible entries received during the application phase will be screened by the Selection Panel for completeness and adherence to criteria as described within the Challenge Objective.

## **Timeline of the Innovation Challenge Call**

The Proposals shall be reviewed on a weekly basis against the criteria described below, until the Call is cancelled.

The upcoming deadlines are:

**Early bird deadline:** October 20<sup>th</sup>, 2020

**2nd phase deadline:** November 20<sup>th</sup>, 2020

## **Steps for Application:**

### **STEP 1: Call for project proposals, submitting applications**

#### *Apply*

Applicants are requested to fill out the online application form. It is the sole responsibility of the applicant to provide correct and updated information.

### **STEP 2: Evaluation and selection of projects for implementation phase**

#### *How will the selection of ideas be done?*

A team of qualified Selection Panel members shall review and evaluate the proposed projects. Based on the evaluation criteria, the Selection Panel will assess projects for their further development and inform the unsuccessful ones, with instruction on how to improve their application.

### **STEP 3: Publication and presentation of selected ideas**

UNDP will publish selected ideas in appropriate public format on IT platform, media, social media and online or in-person events. The selected applicants shall be required to prepare for appropriate presentations and participate in such promotional activities including through written and verbal contributions. In case of failure to do so, the selected idea shall not be supported further.

### **STEP 4: Interaction and negotiation on details project idea**

The selected and presented idea, which has received interest of support by the sources of funding shall work on the creation of full project document, which shall include indicators of success and benchmarks which will trigger payments towards the full implementation of the project idea.

### **STEP 5: Innovation Awards or signing Performance-based Payments Agreement**

For the selected projects which are considered as ready for actual implementation, UNDP could provide appropriate **co-financing**, through the Innovation Challenge Prize or Performance - Based Payments Agreements mechanism. The Applicants are expected to participate either through financial or in-kind contributions (in kind contributions shall be closely scrutinized). UNDP will assess the value of financing per project depending on the envisaged impact. The number of projects selected as finalists for the implementation and value of financing can be increased based on the additional funding resources.

## **STEP 6: Implementation**

UNDP shall agree with the owner of each selected Project the indicators which will demonstrate progress before signing of the Performance-based Payments Agreement. Fulfilling the performance indicators shall trigger payments from UNDP.

### **Application form**

#### **Application form for Challenge Call for corporate and social innovative response to the problem of air pollution**

The application must be completed in Serbian. You must address and respond to each required question.

The application needs to be submitted through an [online form](#).

You are advised to provide links to the following documents in support of your application when you fill out the online application:

- List of previous experience in relevant sectors (list of implemented projects, if applicable),
- Draft partnership agreement (if consortium applies),
- Statement confirming co-financing commitments.

### **Important:**

- **Please ensure that you upload the final and complete version of your application in accordance with the deadlines.**
- **The application form contains specific fields and it is important that you complete each required field.**
- **When populating the application form, please consult relevant evaluation criteria!**

## **CONTACT INFORMATION**

For all information visit:

### **QUESTIONS?**

Email us: [cleanair.serbia@undp.org](mailto:cleanair.serbia@undp.org)

## **Evaluation criteria for Project Proposals**

### **Operational and management capacity – 10%**

Do applicants have the relevant skills, expertise, experience and resources to implement the project successfully within the timeframe? Does project proposal demonstrate complementarity of the participants and the extent to which the consortium as whole brings together the necessary expertise?

### **Project's quality, consistency and feasibility – 20%**

Are the targeted area(s) of intervention relevant and in the scope of the call? Are the overall project objectives and expected outcomes clear, precisely defined, relevant, and realistic? Does the proposed methodology and planned actions guarantee the accomplishment of the proposed development of the technology, product or service? Do the applicants have sufficient access to resources (materials, supplies, analytical services, information, equipment, facilities, etc.) needed to accomplish their goal? Testability within the challenge program duration will also be evaluated.

### **Effectiveness and impact – 30%**

Will the newly developed technology, product or service effectively tackle air pollution issue and improve air quality? Does the solution generate inclusive impact, benefit vulnerable population? What are the expected volumes and quantities which could be produced in a defined

period? Does the applicant have safe distribution network around Serbia? Is there a demand for technology, product, service in the Serbian market?

**Innovation – 20%**

Does the proposed concept, technology or approach possess the novelty value? Will the project result in innovative improvement of existing products, technological solutions and new value chains? Will it create new intellectual property?

**Project budget and financial viability- 20%**

Are the project costs realistic, are the planned actions cost-efficient? For the categories 1-4 of the challenge: Does the proposed approach have potential to lead to a competitive and marketable technology, product or process that could generating revenue? Co-financing commitments already provided to test the solution will be additionally scored.

For the category 5 of the challenge (solutions focused on mitigating/reducing air pollution impact on children): Is a company/team working on open source technology solutions (or willing to be open source) and is the product non for profit?