



# GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: MEDIUM-SIZED PROJECT

TYPE OF TRUST FUND: GEF TRUST FUND

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## PART I: PROJECT INFORMATION

|                             |   |                              |                                       |
|-----------------------------|---|------------------------------|---------------------------------------|
| Project Title:              | Climate Smart Urban Development Challenge   |                              |                                       |
| Country(ies):               | Serbia  | GEF Project ID: <sup>1</sup> | 9342                                  |
| GEF Agency(ies):            | UNDP  | GEF Agency Project ID:       | 5551                                  |
| Other Executing Partner(s): | Ministry of Agriculture and Environmental Protection of the Republic of Serbia  | Submission Date:             | 16 November, 2015<br>22 December 2015 |
| GEF Focal Area(s):          | Climate Change  | Project Duration (Months)    | 60 months                             |
| Integrated Approach Pilot   | IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/> Corporate Program: SGP <input type="checkbox"/> |                              |                                       |
| Name of parent program:     | [if applicable]   | Agency Fee (\$)              | 185,250                               |

## A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>

| Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs) | Trust Fund | (in \$)               |              |
|--|------------|-----------------------|--------------|
|  |            | GEF Project Financing | Co-financing |
| CCM-2 Program 3  | GEFTF      | 1,950,000             | 10,000,000   |
| Total Project Cost   |            | 1,950,000             | 10,000,000   |

## B. INDICATIVE PROJECT DESCRIPTION SUMMARY

| Project Objective: Promote innovation and community engagement for climate smart urban development (CSUD) |                             |  |   |            |                       |              |
|---|-----------------------------|--|---|------------|-----------------------|--------------|
| Project Components  | Financing Type <sup>3</sup> | Project Outcomes   | Project Outputs   | Trust Fund | (in \$)               |              |
|   |                             |  |   |            | GEF Project Financing | Co-financing |
| Component 1: CSUD Open Data Challenge   | TA                          | Better public information on CSUD-related data and performance of Serbian cities | <p>Developed and launched Open Data Challenge (ODC) with related public outreach and initial capacity building targeting both the ITC system developers and municipalities for the conceptual design and implementation of an integrated on-line and, to the extent possible, real-time CSUD monitoring and data management system.</p> <p>Complementary TA and coaching of the teams and cities selected to continue into the second phase of the ODC, including further elaboration of CSUD indicators and benchmarks, on the basis of which the cities can set targets and assess their performance</p> <p>Completed design, institutional and financing arrangements for system(s) selected for full scale testing in selected cities</p> <p>First annual CSUD performance reports by participating cities based on the first year implementation of the system</p> | GEFTF      | 405,000               | 450,000      |

<sup>1</sup> Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

<sup>3</sup> Financing type can be either investment or technical assistance.

|                           |     |   |  |        |         |           |
|---------------------------|-----|---|--|--------|---------|-----------|
|                           |     |   | <p>The most advanced and progressive city/ies and team(s) in implementing and further developing the system awarded with the ODC Prize.</p> <p>Public outreach and capacity building to encourage replication of similar system(s) in other Serbian municipalities and further development of public on-line services in general.</p>  |        |         |           |
|                           | Inv |   | An integrated CSUD monitoring and data management system constructed and equipped with required hard- and software in participating state and municipal CSUD centers /co-ordinating units  | GEF TF | 250,000 | 650,000   |
| CSUD Challenge Program    | TA  | New innovative technical and systemic solutions and business models contributing to CSUD identified, tested and replicated. | <p>An updated scoping study and consultative meetings to provide a basis for the final design of the CSUD Challenge Program in those specific areas and sub-sectors, for which a challenge prize approach can be considered as an attractive and feasible option.</p> <p>Finalized design and implementation plan of the CSUD Challenge Program and the first challenge prizes.</p> <p>CSUD coaching team to support the evaluation and further development of the ideas presented for the CSUD Challenge Program established, including a network of international research institutes and professionals that will provide technical backstopping and share knowledge on the latest international developments in their particular field</p> <p>CSUD Challenge Program launched together with related public outreach, awareness raising and capacity building events and materials (including a dedicated CSUD Challenge Program website/portal)</p> <p>The ideas and capacity of the teams selected for the first phase of the CSUD Challenge Programme developed further and the piloting of the selected ideas agreed with the participating municipalities and other key stakeholders, including an agreement on the related financing arrangements.</p> <p>The first winner(s) of the CSUD Challenge Programme selected and awarded based on one year monitored, reported and verified performance of the pilot initiatives and the criteria published at the CSUD Challenge Program launching phase</p> <p>Public outreach to encourage and facilitate the implementation of the winning solutions in other Serbian municipalities, including structuring financing for them.</p> <p>As required, draft legal and regulatory amendments presented to public authorities to support and/or facilitate further replication of the solutions sourced by the CSUD Challenge Program.</p> | GEFTF  | 610,000 | 650,000   |
|                           | INV |   | The required works and investments on the awarded pilot projects completed   | GEF TF | 500,000 | 7,800,000 |
| Monitoring and evaluation | TA  | NA  | <p>Project inception report</p> <p>Project mid-term and final evaluations</p>  | GEFTF  | 80,000  | 50,000    |

|  |  |  |   |       |           |            |
|--|--|--|---|-------|-----------|------------|
|  |  |  | Complementary "lessons learnt"/final report |       |           |            |
|  |  |  | Subtotal                                    |       | 1,845,000 | 9,600,000  |
|  |  |  | Project Management Cost (PMC) <sup>4</sup>  | GEFTF | 105,000   | 400,000    |
|  |  |  | <b>Total Project Cost</b>                   |       | 1,950,000 | 10,000,000 |

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ( )

### C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

| Sources of Co-financing   | Name of Co-financier  | Type of Co-financing | Amount (\$) |
|---------------------------|---|----------------------|-------------|
| Recipient Government      | Ministry of Agriculture and Environmental Protection (Green Fund) | Grants               | 7,000,000   |
| Recipient Government      | Ministry of Agriculture and Environmental Protection (MAEP)       | In-kind              | 1,500,000   |
| Beneficiaries             | Local Self Governments  | Grants               | 1,000,000   |
| Beneficiaries             | Local Self Governments  | In-kind              | 400,000     |
| GEF Agency                | UNDP  | Grants               | 100,000     |
| <b>Total Co-financing</b> |   |                      | 10,000,000  |

### D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS <sup>a)</sup>

| GEF Agency                 | Trust Fund | Country/<br>Regional/ Global | Focal Area     | Programming of Funds   | (in \$)                   |                              |                  |
|----------------------------|------------|------------------------------|----------------|------------------------|---------------------------|------------------------------|------------------|
|                            |            |                              |                |                        | GEF Project Financing (a) | Agency Fee (b) <sup>b)</sup> | Total (c)=a+b    |
| UNDP                       | GEFTF      | Serbia                       | Climate Change | (select as applicable) | 1,950,000                 | 185,250                      | 2,135,250        |
| <b>Total GEF Resources</b> |            |                              |                |                        | <b>1,950,000</b>          | <b>185,250</b>               | <b>2,135,250</b> |

a) Refer to the Fee Policy for GEF Partner Agencies.

### E. PROJECT PREPARATION GRANT (PPG)<sup>5</sup>

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

### PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

| Project Preparation Grant amount requested: \$50,000 |            |                             |                |                        | PPG Agency Fee: 4,750 |                             |                 |
|--|------------|-----------------------------|----------------|------------------------|-----------------------|-----------------------------|-----------------|
| GEF Agency   | Trust Fund | Country/<br>Regional/Global | Focal Area     | Programming of Funds   | (in \$)               |                             |                 |
|  |            |                             |                |                        | PPG (a)               | Agency Fee <sup>6</sup> (b) | Total c = a + b |
| UNDP   | GEF TF     | Serbia                      | Climate Change | (select as applicable) | 50,000                | 4,750                       | 54,750          |
| <b>Total PPG Amount</b>                              |            |                             |                |                        | <b>50,000</b>         | <b>4,750</b>                | <b>54,750</b>   |

<sup>4</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

<sup>5</sup> PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>6</sup> PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

## F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>7</sup>

Provide the expected project targets as appropriate.

| Corporate Results   | Replenishment Targets   | Project Targets       |
|---|---|-----------------------|
| 4. Support to transformational shifts towards a low-emission and resilient development path | 750 million tons of CO <sub>2e</sub> mitigated (include both direct and indirect) | 1,500,000 metric tons |

## PART II: PROJECT JUSTIFICATION

**1. Project Description.** Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area<sup>8</sup> strategies, with a brief description of expected outcomes and components of the project, 4) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; 5) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

### *The global environmental and/or adaptation problems, root causes and barriers that need to be addressed*

As concluded by the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) released at the end of 2014, "Human influence on the climate system is clear, and recent anthropogenic emissions of green house gases (GHGs) are the highest in history". Although not being a major emitter of GHGs in the global context, Serbia belongs to the top 5 GHG emitting countries of the South-Eastern European region with the estimated 44 million tonnes of CO<sub>2eq</sub> in 2012. The energy supply is dominated by the use of fossil fuels with locally produced coal (lignite) contributing to over 50% of the total primary energy supply, followed by oil products (23%), natural gas (12%), biofuels and waste (7%) and hydro (6%). According to the most recent IEA statistics of 2012, the energy intensity of Serbia exceeds the OECD average by about 4 times, thereby indicating substantial remaining potential to improve also the energy efficiency of the economy.

Climate change mitigation and related EE, RE and other measures are not yet viewed as a primary area of concern by Serbian municipalities. Most municipalities are facing substantial challenges in trying to secure their financial sustainability and satisfy the demand for basic social and other municipal services such as reliable energy and water supply, public transport and waste management. Climate change related issues in this context are typically considered to be of secondary importance despite the common principal agreement and understanding on the need to develop the cities in both environmentally and economically sustainable way.

As concluded also by the First Biennial Update Report (FBUR) of Serbia to the UNFCCC: "In general, the level of integration of climate change issues in the sectoral and the general development strategies, the level of knowledge, institutional and individual capacities, the available technology and, above all, the financial resources are not sufficient for effective and prompt response to climate change"

To effectively address climate change mitigation, there is a need to identify win-win opportunities addressing the primary concerns of municipalities, while also producing tangible GHG reduction benefits. There is a wide and constantly growing spectrum of new technical and systemic solutions available, which can improve the quality and efficiency of public services and create new business and employment opportunities for local communities, while simultaneously contributing to climate change mitigation. The problem is that such new innovations and approaches may never make their way to the actual implementation stage due to different administrative, financial, public perception or other barriers - or simply, because the innovators and possible adopters and beneficiaries of these ideas

<sup>7</sup> Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

<sup>8</sup> For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

are not aware of each other. There may also be no concrete incentives, venues and initial resources to jointly develop such ideas further.

The shortage of financial resources together with other barriers, including lack of credible data to conduct adequate baseline analysis, lack of awareness and capacity to consider, develop and implement state of the art technical solutions, new implementation and financing models as well as lack of concrete incentives to explore and crowdsource new and innovative ideas and approaches often leads to short term solutions to solve the most pending problems, but which may not really address the longer term challenges in an economically, socially and environmentally “smartest” way. While the first project component is seeking to improve the availability of data and other information by an open data approach, the second component will provide complementary incentives and technical backstopping for identifying and testing new innovative ideas and approaches for municipal challenges by addressing both the local economic and social concerns as well those of environmental nature and the climate change in particular.

### *Baseline scenario*

In the baseline, the Government of Serbia seeks to contribute to climate change mitigation by continuing, among others, the transposition of the EU directives dealing with energy efficiency (EE) and the promotion of renewable energy (RE). This effort is complemented and further supported by several internationally financed projects offering technical assistance for public awareness raising and training, financing targeted EE and RE investments in selected subsectors such as in schools, supporting the introduction of energy management systems and establishing specific purpose credit lines and other financing mechanisms to support larger scale municipal EE and RE investments. There is no particular effort or other initiatives, however, to more broadly engage the civil society and business communities to come up with new and innovative ideas on how to contribute to the solving of the pending municipal challenges, while also effectively addressing the environmental and climate change related issues.

Much of the currently available public data on sectors and activities contributing to and/or affected by climate change is scarce, scattered, uncoordinated, difficult to access and not detailed enough to: i) conduct adequate baseline analysis; ii) identify attractive win-win opportunities for CC mitigation; iii) make informed decisions, develop proposals and attract financing for the proposed solutions; and iv) monitor the results

The lack of readily available and credible baseline data often prevents especially the smaller market players such as SMEs and CSOs to effectively analyse the situation, identify opportunities and back up their proposed solutions, some of which may also directly use the data, if made available. While the situation with the energy data is likely to start to develop positively by the introduction of Energy Management Systems in Serbian municipalities and further support provided for this by the recently approved UNDP/GEF project for Energy Management Information Systems, work remains to be done e.g. by integrating this data with other data sources as well as with other sectoral data through a common, easily used and illustrative data exchange platform, through which data can also be obtained for new ICT applications that eventually are to be initiated under the CSUD project.

A number financing initiatives currently underway in Serbia support the idea that enhancing the capacity of both municipalities as well as the civil society and business communities to prepare credible CSUD investment proposals and justifying these initiatives with more accurate data and means for monitoring the results may leverage complementary financing and encourage also new financing models to support project goals

### *Proposed alternative scenario*

The goal of the proposed project is **to promote climate-smart urban development**, but rather than defining the detailed technical and other solutions upfront, it seeks to actively engage citizens, CSOs, public and business communities to come up with new and innovative ideas on how to contribute to this in practice and to jointly develop, finance and implement these ideas further. Possible areas include broader and more effective use of information and communication technologies (ICT), including its integration into existing city management systems to enable and spearhead innovation and productivity gains in city services, optimization of the resource use and reduction of physical mobility needs. Efforts to increase the share of “climate proof” public services by improved energy efficiency and increased use of renewable energy sources, traffic flow optimization and alternative transport modes, including the promotion of carbon-free public and non-motorized transport, building automation systems for lighting, heating, air

conditioning and ventilation, waste management (improving recycling schemes and waste to energy) and contributing to climate change mitigation by other means are also to be considered in this context. The challenge is to identify “the best fit” for a specific problem/city/town, and then finance, implement and sustain the solution in a situation, where the capacities and resources of city authorities to do so on their own are extremely limited.

The project will have a stepwise approach in seeking to achieve its objective. First, the project will build up the capacity and assist participating municipalities to mainstream ICT into city management systems and to put in place digital inventories and tools to gather data, monitor actions and also make this information easily accessible by the public. This is further encouraged by launching the first challenge program for the development and establishment of such systems with phased awards, technical and financial backstopping for most innovative and cost-effective technical solutions and for most progressive municipalities to implement them. Secondly, the project will develop and launch a more comprehensive challenge program for climate smart urban development (CSUD), eventually as a part of the new Green Fund planned by the Government, as an innovative mechanism to source solutions for low-carbon activities and to coach and support their further development and testing. Finally, the project will monitor and evaluate the impact of the supported activities and backstop their replication and mainstreaming, including, as applicable, further development of the national legal and regulatory framework in order to create an enabling environment for the identified climate-smart solutions and for encouraging innovation in urban management in general. These activities are structured under two main project components, which are elaborated in further detail below.

#### **Component 1. CSUD Open Data Challenge for new ICT tools and platforms for Serbian municipalities for climate-smart management, monitoring and reporting**

Along with the rapid development of the information and communication technologies (ICT), the need and new technical possibilities for open information sharing by public authorities has drawn much attention in recent years. While improving the transparency of public decision making in general, this “open data” approach may also encourage the users of different communal services to think how to deliver such services in a more cost-effective, socially acceptable and/or environmentally friendly way as well provide a ground for new innovations that may either directly or indirectly use the data made available.

Component 1 will assist the participating municipalities to develop their capacities to gather and monitor CSUD related and, to the extent possible, real time data with an emphasis on integrated, cross-sectoral data management systems and development of web portals and mobile platforms for facilitating public access to this information. More specifically, support is foreseen to be provided in the following areas:

- i) Review of the current monitoring and information management systems both at the central and local government levels in CSUD related sectors such as energy, transport, construction, urban planning, water and waste management and on the eventual administrative and other barriers to implement such systems in a more integrated and co-ordinated way;
- ii) Initial awareness raising and capacity building of the key public sector and other stakeholders on the Open Data concept, related challenges and opportunities as well as organisational and technical options to implement such systems in practice;
- iii) Developing and launching an Open Data Challenge Program for encouraging innovations and broad stakeholder engagement and by a step-wise approach gradually increasing development and implementation support for solutions and sites demonstrating best progress and success;
- iv) Replication and mainstreaming of the adopted ICT solutions and platforms, including elaboration of common benchmarks to enable participating municipalities to set targets and monitor their progress against these benchmarks and targets; and
- v) Further development of municipal on-line services in general to simplify the procedures and reduce the physical mobility needs when applying e.g. for different social services

In the proposed project budget, USD 250,000 of GEF funds has been earmarked for improving the basic data collection and management facilities with investment in related hard- and software support at the municipal level,



where much of the initial data collection takes place and where primary deficiencies are likely to be. This is complemented by launching an Open Data Challenge for developing a common interface and platform to facilitate easy and free access to the data of all these decentralized databases apart from what specific software programs those databases may use or where they may be located. Such approaches have been successfully tested and taken into use, for instance, in Estonia by the so called “X-road” data exchange platform.

For any energy related data, the project can build on the groundwork to be laid by the recently approved UNDP implemented, GEF funded EMIS project (PIMS 4588, GEF ID: 5518) to introduce and support the implementation of municipal Energy Management Systems (EMS), including Energy Management Information Systems (EMIS). Compared to the EMIS project, however, the new CSUD project is seeking to apply a more multi-sectoral approach across the different secretariats of municipal administration addressing the environmental, housing, construction, urban planning, waste and water management, transport, energy and social issues in line with the smart city concept.

## **Component 2. CSUD challenge program for harnessing innovations for climate-smart urban development and supporting their further development and mainstreaming.**

This component will support the design, establishment and operation of a challenge program for climate smart urban development. The program will target businesses, communities and citizens, and will seek to identify solutions, which involve partnerships between these groups and the participating municipalities. In doing so, the aim will be to harness entrepreneurship and foster shared goals around climate-smart urban development. The municipalities, however, will be the primary beneficiaries of the activities funded and implemented.

The challenge program will be designed by taking into account the latest international experience and lessons learnt, while at the same time considering the specific challenges and framework conditions in Serbia. The design considerations will include, among others:

- i) Clear definition of the challenges around specific public service (e.g. district heating, public transport, waste management, energy supply, lighting, etc), which has to be improved, while at the same time secure clear climate benefits (GHG emission reduction). The priority areas (initially up to three), for which the challenge program should invite proposals, will be identified in co-operation with the municipalities that have expressed their interest to participate in the program implementation.
- ii) Focus on innovative, but at the same time implementable solutions. The evaluation criteria should promote concrete, yet innovative, solutions that can be implemented and brought to development quickly. Solutions based on new business models, ICT (e.g., cloud computing, sharing economy, big data) and behavioral shifts (e.g., by nudging or labeling) will be encouraged;
- iii) Multiple stages. Applicants will be guided through multiple stages, with low-barriers to entry for early rounds, followed by increasingly demanding stages. These stages will be scheduled on a tightly focused timetable, generating a sense of momentum to turn ideas into action. Technical and financial support will be offered at each stage strengthening proposals as they advance; and
- iv) Substantial financial prizes (to cover investment costs) and other technical support for the winning solutions to encourage their initial development as well as testing them in practice. In addition to GEF funding, co-financing will also be provided from other stakeholders including, as applicable, the Government, large private sector IT and other companies.

The activities supported by the CSUD challenge program will be closely monitored throughout their implementation and the gathered information and lessons learnt analyzed, documented and disseminated. The innovations and solutions showing potential for replication will be promoted by specific events, eventual documentaries, web-based information sharing platforms (incl. eventual virtual CSUD market places) and other supporting materials and actions to raise awareness, facilitate contacts and establishment of new business and other partnerships as well as by building the capacities of both the innovators and foreseen beneficiaries to further develop the proposed solutions and structure financing for them. Such marketing and business development support by open data, information and knowledge sharing platforms can also benefit the non-awarded innovators and proposed solutions.

As required, the project will also support further development of an enabling policy environment for climate-smart urban development, including social innovations with links to smart urban planning policies and community engagement, efforts to create new "green" jobs, promoting "circular" and "sharing" economies together with decentralized renewable energy generation, "zero energy" facilities etc. For this, the projects will work in close co-operation with the relevant institutions of the participating municipalities, as well as with national authorities, such as the Ministry of Agriculture and Environmental Protection, the Ministry of Mining and Energy, and the Ministry of Construction, Transport and Infrastructure.

#### *Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF and co-financing*

The project has been formulated to primarily contribute to the implementation of Program 3 "Promote integrated low-emission urban systems" under Climate Change Objective 2 "Demonstrate systemic impacts of mitigation options" of the GEF-6 Programming Directions adopted by the GEF Assembly in May 2014.

Given their new and innovative nature, the activities described above are clearly incremental not addressed by any baseline activities yet. Cofinancing for the proposed activities and especially for replicating and mainstreaming the most successful solutions is, however, expected from a variety of stakeholders:

One of the expected main sources of project cofinancing is the Green Fund, which is being established by the Government of Serbia under the management of the Ministry of Agriculture and Environmental Protection. A public hearing of the draft Law on Amendments and Supplements of the Law on Environmental Protection (including provisions for the establishment of Green Fund) was completed on July 10, 2015. The adoption of the law is envisaged by the end of 2015 and its entering into force in January 2016. In 2014, the funds collected from environmental fees in Serbia were around 60 million Euro (state budget). This presented a growing trend compared to 2012 and 2013 with an average income of 45 million Euro over the past 3 years (which average will be used as a basis for annual budget planning). In addition, Green Fund can dispose funds from international organizations, donations and other sources. Many local governments have also their own environmental funds providing another potential source of public cofinancing.

UNDP has agreed to contribute with USD 100,000 in cash from its core resources to project financing. As it concerns other donor organisations, initial talks during the PIF preparation phase were held with the Swiss Co-operation Office in Serbia about possible co-operation in launching and implementing a CSUD Challenge Program. These consultations will be continued during further project preparation.

Finally and similar to other challenge programs, the private sector has already invested or is likely to invest significant resources for bringing the ideas up to the stage that can be presented as a response to the challenge.

The indicative amounts and sources of project cofinancing based on the initial discussions and estimates made during the PIF preparation stage are summarized in table C of Part I. This will be completed during the final project preparation.

#### *Global environmental benefits*

The global environmental benefits of the project consist of the resulting GHG emission reductions. By building on the GHG reduction analysis made for the recently approved UNDP/GEF EMIS project (for further details see section 5 of this PIF), the public sector GHG emissions from heat and electricity only (not including the emissions from public transport or waste management) were estimated at 5.4 million tons of CO<sub>2</sub>eq in 2012, of which 2.1 Mtons from space heating and 3.3 Mtons from electricity consumption for other than space heating purposes. For estimating the direct GHG emission reduction target of the project, the average total investment costs of USD 100 per ton of CO<sub>2</sub>eq reduced for building EE improvements in Serbia (by building on a comprehensive WB study<sup>9</sup> done on the subject a few years ago) was used as a basis for these estimates. In the absence of more detailed information about the specific solutions to be selected for further support under the CSUD Challenge Program, a similar figure can be used for estimating the required GHG reduction costs in terms of the total investment, although especially for many ICT

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<sup>9</sup> National Building Energy Efficiency Study for Serbia, World Bank/Econoler, October 2012



based solutions the cost-efficiency of the investment can be significantly better. Nevertheless, by this and the financial leveraging target of about USD 10 million by the end of the project for actual investments, the corresponding direct GHG reduction benefits could be in the range 100 ktons of CO<sub>2</sub>eq.

For indirect GHG emission benefits, it was estimated that by gradual adoption and effective use ICT solutions in the Serbian municipalities and by encouraging both behavioural and operational changes as well as actual investments, the municipal sector energy consumption nation-wide could be reduced by an incremental 1% per year after the expected end of the project in 2020 (limited to space heating and electricity only), thereby resulting in cumulative GHG reduction of about 3 million tons of CO<sub>2</sub>eq by 2030. The value added of the CSUD project by successful replication of the new innovations promoted by the Challenge Program and its continuation by the Government after the UNDP/GEF project end could easily add another 0.5 - 1% in GHG savings i.e. a cumulative amount of 1.5 - 3 million tons of CO<sub>2</sub>eq by 2030 as an incremental indirect impact of the CSUD project.

### *Innovation*

The known history of the challenge prizes goes back to the 18th century and more recently there have been some attempts to apply the challenge prize idea also for combatting climate change, including the £1 million Big Green Challenge launched by a British Innovation Charity NESTA in 2007 and the USD 20,000 Renewable Energy Challenge launched jointly by UNDP and NESTA at the end of 2012. As such, while the challenge prize as a process and method for crowdsourcing new and innovative ideas has no fundamental new elements of innovativeness on its own, its application for GEF funded projects to identify new and innovative solutions for climate change mitigation and climate smart urban development in general has such elements. The focus on the open data approach and the challenge prizes has also not been applied in any other climate change related work in Serbia. There have been several projects collecting data and establishing databases for different CC related sectors, but a systematic cross-sectoral approach trying to open broad, easy and integrated *public access* to this data through a common interface to support climate smart urban development has not been initiated in Serbia yet, nor in any other South-Eastern European country.

### *Sustainability*

For the sustainability of the project, it is essential that the measures and activities promoted and supported offer both long and shorter term “win-win-win” opportunities, including environmental, economic and social benefits. Realistic cost-sharing opportunities of the municipalities will be taken into account from the very beginning together with the effective engagement of the private sector. Sustainability of project results will also be ensured by building ownership and trust with both state and local (municipal) level authorities through: i) raising the awareness of key decision makers by demonstrating the direct financial and other benefits resulting from effective implementation of proposed CSUD measures; ii) building the local capacity to operate and use them in a productive way leading to concrete GHG gas emission reductions; iii) completing and implementing public visibility plans and actions to present the achieved results also to the general public; and iv) focusing the initial project efforts to those municipalities only, from which firm political and financial commitments for co-operation can be obtained. The project is also seeking to support further development of a national policy and financing framework conducive to CSUD.

### *Market transformation and scaling up*

The ability of the project to advance CSUD related transformational changes is closely related to the topics discussed under the section “Sustainability”. A critical element to continue the market transformation is also to ensure that adequate financial resources to support this process are available from the Government side as well as to have some predictability on such resources over several years rather than relying on annual budget decisions only. Envisaged collaboration with the Green Fund and other alternative longer term financing options for CSUD will be essential in this respect. The process will be further encouraged, as needed, by assisting the Government in drafting new legislative and regulatory acts (or amending the existing ones) to support CSUD as well as by facilitating the transfer of the knowledge and experience gained by the participating municipalities during the course of this project to the entire country by using public media, seminars, workshops and other already existing communication and co-operation platforms of the Serbian municipalities. Given the foreseen interest of several UNDP-GEF programme

countries to similar activities, the materials developed and the results and lessons learned in this project are expected to be of direct interest also to them.

2. *Stakeholders.* Will project design include the participation of relevant stakeholders from civil society organizations (yes ☒ /no ☐ ) and indigenous people? (yes ☐ /no ☒ ) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation.

The project will engage a variety of stakeholders both for the design and implementation of the Challenge Program. The first project component with the promotion of open data is seeking to improve public access, including CSOs, to up to date information on the progress of country in respect to different CSUD indicators, which already on its own should enable more active and substantial participation of the civil society in the policy discussion and in developing the country further. As it concerns the second project component, the initial consultative meetings will include also CSO representatives and the CSOs will be eligible to participate in the Challenge Program and compete for the Challenge Prize(s). Some CSOs in Serbia working as innovation labs or "think-tanks" already exist and were consulted also during the PIF preparation.

The key stakeholders of the project otherwise will consist of the Ministry of Agriculture and Environmental Protection being the main Government counterpart agency of the project as well as other Ministries that may contribute to the project or with whom the project activities need to be co-ordinated such as the Ministry of Mining and Energy (acting as the lead agency for EE and RE related activities, including energy management systems) and the Ministry of Construction, Transport and Infrastructure. As it concerns the local self governments, the project looks forward to work more closely with 3-5 city administrations showing biggest interest, commitment and potential to benefit from the project activities. The initial selection will be done as a part of the Challenge Program design. Nevertheless, should any city submit later, eventually in partnership with a CSO or a private sector entity a promising proposal to the Challenge Program, their inclusion at a later stage can also be considered.

In addition to the above, the project looks forward to co-ordinate its activities with those of other donors and actively explore opportunities for co-operation for activities of common interest. Initial discussions in this respect during the PIF preparation stage were held, among others, with the Swiss Co-operation Office in Serbia. Furthermore, the project seeks to actively engage the private sector to contribute to the successful outcome of the Challenge Program, both as a source of new innovative solutions as well as a potential source of financing for the related follow-up activities.

3. *Gender Equality and Women Empowerment.* Are issues on [gender equality](#) and women's empowerment taken into account? (yes ☒ /no ☐ ). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

Given the nature of the project and the country context, no activities are planned to address the gender aspects in particular, but the project presents an equal opportunity for both men and women to participate and benefit from it. It is to be noted, however, that women represent a significant share of public sector employees in Serbia, so much of the project impact to streamline and improve the efficiency of the public sector operations, e.g. by new and innovative use of ICT will directly affect the women.

4. *Risks.* Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

The main identified risks to the successful implementation of the project include:

a) Political risk due to the lack of political will either at the central or local governmental level to effectively participate in the implementation of the challenge program and/or the winning solutions. Another significant factor contributing to this are the upcoming municipal elections in 2016, which may influence the project progress in some municipalities both before and after the elections. This risk is sought to be mitigated by identifying win-win

opportunities not addressing climate change mitigation only, but challenges on which there is a common agreement within the participating municipalities to be among the most pending ones. Furthermore, the final selection of the participating cities is suggested to be done only during the final design and/or implementation of the Challenge Program on the basis of their demonstrated interest and commitment to effectively participate in and contribute to project implementation.

b) Financial risk that the municipalities do not have the financial resources to invest in the proposed solutions or for their effective replication. At this PIF stage there are also still some uncertainties about the establishment of the Green Fund as one of the main cofinancing sources of the project. These uncertainties are expected to be sorted out, however, before the request for final CEO endorsement. Still, a risk remains for Green Fund to be subject to future political changes. This risk will be mitigated by having binding cofinancing letters from Government as a prerequisite for final project approval. A number of ongoing parallel projects funded by both bi- and multilateral donors and the already existing environmental funds managed at the level of local governments will also mitigate this risk, as the solutions showing success may also be picked up for their financing.

c) A risk that the announced challenges and prizes do not motivate the innovators i.e. no proposals of decent quality and amount are received. This risk is obviously very real, while also difficult to predict in advance, but will be mitigated by careful preparation and design of the set challenges, including a comprehensive scoping study, consultations and capacity building of the targeted municipalities in prior to launching the challenge. Also, partnership with NESTA, world-leader in implementing “challenge” programs will help to address this risk and ensure robust design of the program. The reward for winning solutions (in terms of money, recognition, visibility or potential for replication) should be assessed as high enough by the innovators considering their participation to justify the risk of not being awarded. Adequate follow-up should also be secured for those non-awarded, but still promising solutions that may benefit from the complementary information sharing and networking activities of the project.

d) Technology risk: Due to technical failure of the equipment and/or software used, the trust of the key stakeholders and investors on the proposed solution(s) is lost. Given the innovative nature of the proposed solutions, this risk is definitely present, but will be mitigated by adequate pre-testing of the proposed solutions. As a part of that, adequate emphasis also needs to be put on the network safety and data protection of any ICT solutions tested and taken into use.

e) Environmental risk: The proposed solution(s) may generate waste that is harmful to the environment, if not properly managed and disposed. The project will mitigate this risk by having as an obligatory component for all challenges that the proposed solutions need to include an environmental impact assessment (not a full fledged, but of a scale corresponding to the type and stage of development of the solution) addressing also the waste issue.

f) Operational risk concerning inadequate local capacity at the municipal and central government level to effectively run or participate in the Challenge Program. The strong focus of the project on capacity building and coaching is expected to mitigate this risk.

g) Operational risk due to inadequate and/or non-capacitated human resources of the core project team to successfully implement the project and support the mainstreaming of its results. Due to the innovative and somewhat exceptional project implementation approach, this risk is considered to be relatively high. Given the critical role that the project manager and the rest of the project team has in achieving the project results, duly emphasizing and taking into account the required qualifications to be presented in greater detail in the Terms of Reference of these positions will be of utmost importance for project success. Furthermore, this risk is foreseen to be mitigated by teaming up with an international expert entity having experience of designing and running challenge programs in other countries as well as by benefiting from the resources of the coaching team to be established under component 2 of the project.

*5. Coordination.* Outline the coordination with other relevant GEF-financed and other initiatives.

There are four GEF financed activities with relevance to the proposed project currently under implementation in Serbia, all with UNDP as the implementing agency. The co-ordination arrangements with these initiatives are briefly discussed below:

The project to support the preparation of the second national communication of Serbia to the UNFCCC has been under implementation since 2012 and is expected to be finalized in 2015. The preparation of Serbia's First Biennial Update Report to the UNFCCC was started in 2014 and is expected to be finalized by the end of 2015 as well. These together with the envisaged future preparation of the third national communication of Serbia will link to the proposed CSUD project as it concerns, in particular, the preparation of national GHG inventories and mitigation plans. The open CSUD monitoring and information management systems should directly contribute to the preparation of future national GHG inventories and mitigation plans together with the Energy Management and Information Systems supported under the UNDP/GEF EMIS project.

The project "Removing Barriers to Promote and Support Energy Management Systems in Municipalities throughout Serbia" was endorsed by the GEF at the end of June 2015. The project objective is to introduce and support the implementation of municipal Energy Management Systems (EMS), including Energy Management Information Systems (EMIS), throughout Serbia, to increase the energy efficiency investments in public buildings and municipal services and to facilitate their more energy efficient operation in general. While the minimum project target by the end of the project is to have at least 30 Serbian municipalities to formally adopt and start the implementation of EMS and EMIS, the project also seeks to facilitate their replication in other Serbian municipalities. The main connection points of this and the proposed new CSUD project will be in the effort to go beyond municipal EMIS to establish an open, publicly accessible monitoring and information system for CSUD. The energy performance of Serbian cities both in terms of energy efficiency and the use of renewable energy will be among those CSUD indicators and much of the required monitoring data for this is expected to be possible to draw directly from the EMIS. However, the proposed CSUD project and the component 1 in particular will complement and expand the scope of the EMIS by defining and adding monitoring data for other CSUD indicators such as from the transport, waste and eventually social sectors and will also work on the interfaces and applications that may use the data both from EMIS and other databases in a fully integrated, publicly accessible and easily interpreted and reusable form. For component 2 of the CSUD project, much of the baseline data for any eventual EE related challenges is expected to be drawn from EMIS. EMIS may also be used by the participants responding to such challenges in identifying the areas and subsectors for the biggest opportunities for energy savings as well as for calculating the GHG reduction impact of their suggested innovation.

The implementation of the project "Reducing Barriers to Accelerate the Development of Biomass Markets in Serbia" was started in May 2014 with a focus on institutional strengthening, awareness raising, capacity building and creating an enabling policy framework for increasing the use of biomass as an energy source in Serbia. As a complementary incentive to encourage private investments in biomass energy, the project includes an Investment Grant Support Mechanism with the aim of realizing up to 6 biomass/biogas projects that feed electricity into the grid, followed up by another twelve projects that are expected to be realized after the end of the project. Models for long term biomass supply agreements and appropriate licensing procedures necessary for developing biomass market in Serbia will also be prepared. The areas for co-ordination with the UNDP/GEF biomass projects consist of information sharing as it concerns any biomass related activities as well as possible challenges within the challenge program that may complement the activities of the biomass project for topics and areas that may require such complementary support. An illustrative example of such support could be, for instance, a challenge prize for launching and successfully implementing a new business idea for improving the collection of industrial waste wood, forest residues or other organic materials for sustainable long term fuel supply to the planned bioenergy plants.

The Swiss Co-operation Strategy for Serbia in 2014-2017 is defining three main objectives for the Swiss support: i) advance democratic, efficient and effective governance in Serbia; ii) enhance the competitiveness of the Serbian economy; and iii) increase energy efficiency and the use of renewable energy. Initial consultations about possible co-operation between the CSUD challenge program and the ongoing and planned Swiss activities within the current programming period were held with the representatives of the Swiss Co-operations Office in Serbia already during the PIF preparation stage and these consultations will be continued during the final project preparation.

There are also several other donors, including both bilater and multilateral donors encouraging Serbian municipalities to invest in different climate change mitigation measures, primarily energy efficiency and renewable energy through various grant or loan based financing mechanisms. They can also be considered as potential investors and cofinanciers to facilitate the testing and replication of the innovations brought up by the proposed

CSUD Challenge Program. Similarly, the financing mechanisms established by the Government of Serbia such as Energy Efficiency Fund managed by the Ministry of Mining and Energy and the Green Fund planned to be established under the management of the Ministry of Agriculture and Environmental Protection may become an important source of follow-up and cofinancing of the proposed CSUD Challenge Program. The tentative discussions with the Ministry of Agriculture and Environment have envisaged the Green Fund as a possible host and funding source for continuing the CSUD Challenge Program after the end of the UNDP/GEF project, if showing success.

Finally, the smart city indicators and characteristics also include social dimensions. While the activities of the proposed CSUD Challenge Program will primarily focus on measures with tangible climate change mitigation benefits, their social aspects and possible win-win opportunities are not to be neglected. A regional CSO initiative "Social Innovation Lab (SIL)" established in 2001 and currently active in seven Western Balkan countries targets to "re-examine current development practices and approaches to socio-economic challenges, as well as create new practices through innovative, cross-cutting methodologies, tools and policies". SIL provides an illustrative example of the type of new and forward looking CSOs and think-tanks, with whom the opportunities for co-operation and co-ordination in the frame of the CSUD Challenge Program can be explored further.

*6. Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no ☐ ). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

The main driver for the current legal and regulatory work and related strategies and implementation plans is to harmonize them with those of the European Union in accordance with the Energy Community Treaty signed in 2005. Serbia has been an EU candidate country since March 2012 and talks are ongoing concerning Serbia's possible EU membership. As such and for the time being at least, the consistency of the project design with the national strategies, and as it concerns the GHG mitigation, energy efficiency and renewable energy targets in particular, can be first compared with those of the EU.

The EU targets adopted in 2007 and commonly known as the "20-20-20" targets set three key objectives for 2020:

i) a 20% reduction in EU greenhouse gas emissions from 1990 levels; ii) raising the share of EU energy consumption produced from renewable resources to 20%; and 20% improvement in the EU's energy efficiency. In October 2014, the EU leaders agreed on new aggregated targets (so called 2030 Framework) calling for the reduction of GHG emissions by at least 40% below the 1990 level, improving the energy efficiency by at least 27% and increasing the share of renewable energy to at least 27% by 2030, which together are to provide the basis for future EU energy policy response. Although not yet reflected in the Serbian legislation, this is likely to come at some point in the form of new EU directives with more detailed measures and policy requirements to meet such targets and which are to be transposed also into the Serbian legislation.

The EU roadmap until 2050 (COM 2011 - 112) goes further by suggesting a target for cutting the GHG emissions by 80% below 1990 levels and with a vision to transform EU into a low carbon economy by 2050. To reach this, the document is recognizing, among others, "the need for new and innovative solutions to mobilise investments in energy, transport, industry and information and communication". For the time being, however, such "new and innovative solutions" can still be considered as fully incremental to the existing baseline policies.

For smart cities, no particular policy framework yet exist either at the EU or Serbian national level, but several initiatives have been launched to promote the smart city concept such as the "European Innovation Partnership on Smart Cities and Communities (EIP-SCC)" launched in 2011. There is also no agreed common definition for a "smart city", but typically it refers to a city actively engaging its residents for city development, green urban planning, "smart" use of ICT to improve the efficiency and/or quality of different public services, encouraging efficient use of resources and resource sharing, carbon free energy generation and transport and providing a healthy, safe and vivid living environment otherwise by effectively addressing the social and cultural needs of the various groups of city residents. Similar objectives are commonly found scattered in different sectoral policy documents both at the EU and national level, although not necessarily referred to as elements of "smart cities". The challenging and to great



extent still missing part is, however, how to reach these goals in practice, which is why the door still widely open for new and truly innovative solutions.

The “Second National Communication to the UNFCCC for Serbia” project enables the Republic of Serbia to prepare and submit its Second National Communication (SNC) to the Conference of the Parties of the UNFCCC . The second national communication of Serbia is going to be finalized by the end of 2015. The SNC will update and strengthen information provided regarding national circumstances, greenhouse gas inventories (for the period 1990 - 2009), climate change mitigation (including GHG emission projections until 2030) , vulnerability to climate change and steps taken to adapt to climate change, and information on public awareness, education, training, systematic research and observation, and technology transfer.

The “Serbia’s First Biennial Update Report” project enables the Republic of Serbia to prepare and submit its First Biennial Update Report (FBUR) to the Conference of the Parties of the UNFCCC. The FBUR, which will be completed by October 2015, will update and strengthen information provided regarding national circumstances, greenhouse gas inventories (for the period 2010 - 2013), climate change mitigation (including developing a cadastre of NAMAs and GHG emission projections until 2020), as well as identify constraints, gaps, and financial, technology and capacity building needs. The FBUR will also result in appropriate arrangements for domestic Measurement, Reporting and Verification.

The activities described above will contribute to the development and enhancement of national capacities in fulfilling the country’s commitments to the Convention and raise awareness and knowledge of government planners on issues related to climate change and limitation of greenhouse gas emissions. The process of preparing SNC and FBUR will enable incorporation of climate change issues into national and local development agendas and the CC mitigation measures presented in both documents are representing guidance not only for central government, but for the local self-governments as well. CSUD project represents ideal opportunity for local self-governments to initiate complementary activities in terms of collection and management of GHG emissions related data, as well as to initiate concrete actions and innovative solutions for direct GHG emission reduction, thereby also contributing to the national GHG reduction targets.

*7. Knowledge Management.* Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

For knowledge management, the project will build on the "Open Data" and "Open Knowledge" approaches by making all the project related documentation, presentations, training materials as well as proposals and solutions developed in the frame of the Challenge Program public in a specific CSUD website, unless there is a specific reason for not doing so (e.g. for protecting some intellectual property rights). This applies also for project mid-term and final evaluations, which similar to all GEF financed UNDP implemented projects can be downloaded from the public UNDP website: [web.undp.org/gef/evaluation.shtml](http://web.undp.org/gef/evaluation.shtml)

The “Open Data” may be accessed without or with registration, depending on complexity of the requested data and benefits of social networking with people interested in this data. Such people have often proven to be the most valuable part of similar knowledge management systems.

For learning from corresponding initiatives in other countries and for ensuring that the latest global knowledge, systemic approaches and technological developments can be taken into account in defining the challenges, evaluating the proposals received and coaching the proponents and other key stakeholders to develop them further, the project shall link up with other knowledge management networks and platforms such as the already mentioned EIP-SCC, The "Open Knowledge" initiative, UNDP Social Innovation Expert Roster, national innovation foundations such NESTA funded by the UK government as well as global challenge prize market places such as InnoCentive to just mention a few. Furthermore, the core project team will be supported by the CSUD coaching team established under component 2, including a network of international research institutes and professionals that may provide technical backstopping and share knowledge on the latest international developments in their particular field (e.g. as invited speakers and contributors to the events organized by the project).

**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

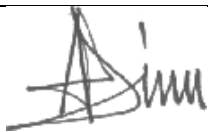
**A. RECORD OF ENDORSEMENT<sup>10</sup> OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**

(Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this SGP OFP endorsement letter).

| NAME          | POSITION                                     | MINISTRY   | DATE (MM/dd/yyyy) |
|---------------|--|--|-------------------|
| Stana Bozović | State Secretary, GEF Operational Focal Point | Ministry of Agriculture and Environmental Protection | 12/04/2015        |

**B. GEF AGENCY(IES) CERTIFICATION**

**This request has been prepared in accordance with GEF policies<sup>11</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6.**

| Agency Coordinator, Agency name                | Signature   | Date (MM/dd/yyyy) | Project Contact Person                           | Telephone        | Email                       |
|--|---|-------------------|--|------------------|-----------------------------|
| Adriana Dinu, UNDP – GEF Executive Coordinator |  | December 22, 2015 | Marina Olshanskaya, UNDP-GEF RTA, Europe and CIS | +90-545-908-6604 | marina.olshanskaya@undp.org |

<sup>10</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

<sup>11</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF