United Nations
Framework Convention on
Climate Change

NAMA Seeking Support for Implementation

A Overview

A.1 Party Bosnia and Herzegovina

A.2 Title of Mitigation Action: Sustainable and energy efficient building of Faculty of Architecture, Civil Engineering and Geodesy in Banja Luka

A.3 Description of mitigation action: The main objective of the project is to reduce GHG emissions from building sector and at the same time set a prototypical example for solving the problem of spatial and technological capacity for teaching and scientific research by designing and construction of environmentally friendly and energy efficient building of FACEG. The goal is to establish sustainable instrument for managing energy of the building which will result in reduction of CO_2 emission for over 50% in relation to the CO_2 emission of buildings of educational purpose with the typical spatial configuration and materialisation in Banja Luka.

A.4 Sector

- ☐ Energy supply
- ☒ Residential and Commercial buildings
- ☐ Agriculture
- ☐ Waste management
- ☐ Transport and its Infrastructure
- ☐ Industry
- ☐ Forestry
- ☐ Other <Pls enter Other text here>

A.5 Technology

- ☐ Bioenergy
- ☒ Energy Efficiency
- ☐ Hydropower
- ☐ Wind energy
- ☐ Carbon Capture and Storage
- ☐ Land fill gas collection
- ☐ Cleaner Fuels
- ☐ Geothermal energy
- ☐ Solar energy
- ☐ Ocean energy
- ☐ Low till / No till
- ☐ Other <Pls enter Other text here>

A.6 Type of action

- ☒ National/ Sectoral goal
- ☐ Strategy
- ☐ National/Sectoral policy or program
- ☐ Project: Investment in machinery
- ☒ Project: Investment in infrastructure
- ☐ Project: Other
- ☐ Other: <Pls enter Other text here>

A.7 Greenhouse gases covered by the action

- ☒ CO_2
- ☐ CH_4
- ☐ N_2O
- ☐ HFCs
- ☐ PFCs
- ☐ SF_6
- ☐ Other <Pls add in text here>

B National Implementing Entity

B.1.0 Name University of Banja Luka, Faculty of Architecture, Civil Engineering and Geodesy
B.1.1 Address Vojvode Stepe Stepanovica 77/III, 78 000 Banja Luka, Bosnia and Herzegovina

B.1.2 Contact Person Milenko Stankovic, Dean
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C. Expected timeframe for the implementation of the mitigation action
C.1 Number of years for completion 2
C.2 Expected start year of implementation 2016

D.1 Used Currency **EUR**
Conversion to USD <to be filled automatically>

E Cost
E.1.1 Estimated full cost of implementation 11 946 550.00
Conversion to USD <to be filled automatically>

E.1.2 Comments on full cost of implementation
The first phase of the construction works are already finished and total cost were 2 926 549,68 EUR provided by University of Banja Luka and Government of Republic of Srpska.

E.2.1 Estimated incremental cost of implementation 3 564 150.00
Conversion to USD <to be filled automatically>

E.2.2 Comments on estimated incremental cost of implementation
Estimated incremental costs are calculated according to the average value of the investment (already invested + estimated costs) which is around 1 788, 50 EUR/m^2, and average value of investment in building of typical construction and materialisation on B&H market which is 1 226,50 EUR/m^2.

F Support required for the implementation of the mitigation action

F.1.1 Amount of financial support 9 020 000.00
Conversion to USD <to be filled automatically>

F.1.2 Type of required financial support

- ☒ Grant
- ☐ Loan (sovereign)
- ☐ Loan (Private)
- ☐ Carbon finance
- ☐ Other <Pls enter Other text here>

☐ Concessional loan
☐ Guarantee
☐ Equity

F.1.3 Comments on Financial Support

The first phase of the construction works are already finished and total cost were 2 926 549,68 EURO provided by University of Banja Luka and Government of Republic of Srpska.

F.2.1 Amount of Technological Support 0.00
Conversion to USD <to be filled automatically>

F.2.2 Comments on Technological Support

Since the architectural project of the building is already finished, along with the *Study on the feasibility, energy efficiency and transfer of knowledge and technology*, *Elaborate on geomechanical investigations* and *Elaborate on harmful ionising radiation*, there is no need for technological support.

F.3.1 Amount of capacity building support 20 000.00
Conversion to USD <to be filled automatically>

F.3.2Type of required capacity building support
☒ Individual level
☐ Institutional level
☒ Systemic level
☐ Other <Pls enter Other text here>

F.3.3 Comments on Capacity Building Support Capacity Building Support will be used for implementation of educational programs for students and other interested individuals about the problems of energy efficiency and climate change, such as seminars and workshops.

F.4 Financial support for implementation required ☒
F.5 Technological support for implementation required ☐
F.6 Capacity building support for implementation required ☒

G Estimated emission reductions

G.1 Amount **228 metric tonne CO_2/y**

G.2 Unit 0,000228 MtCO2e

G.3 Additional information (e.g. if available, information on the methodological approach followed): Energetic, economic and environmental analysis was conducted on representative samples of existing buildings at the University town in Banja Luka to estimate emission reductions. In this sense, apart from the new building of FACEG, the Rectorate building and the building of Faculty of Philology were chosen for comparative analysis of general, energetic and ecological parameters according to architectural characteristics and years of construction and reconstruction.

H.1 Other indicators of implementation <Pls enter Comments here>

I.1 Other relevant information including co-benefits for local sustainable development

- Improvement of the quality of the environment through the reduction of water pollution, maintenance and preservation of existing green structure and through the use of renewable energy sources for heating and cooling of air and wather in the building;

- Transfer of knowledge and new technologies through application of the recently developed principles and infrastructure on energy efficiency in buildings;

- Significant improvement of spatial and technological capacity for teaching and scientific research at FACEG and University of Banja Luka;

- Initiation of the conceptualization and realization of a larger project of regeneration of the University campus and the waterside, according to *BlueGreenDream* principles, as a measure to adaptation to climate change in urban systems by exploiting the synergies of water and green structures. FACEG building would be defined as the focal point of the project.

- Increase of citizens' awareness on their responsibility towards the environmental protection and sustainable use of energy, by applying energy efficiency measures in educational facilities and creation of role-model building;

- Long-term effect on knowledge transfer since the new build is educational facility for students of architecture and civil engineering as future experts on energy efficiency of buildings. The building would serve as a tool box for the future generations of students in the filed of energy efficiency of buildings.

J Relevant National Policies strategies, plans and programmes and/or other mitigation action

J.1 Relevant National Policies

- Strategy for Climate Change Adaptation and Low-emission Development for Bosnia and Herzegovina (2014),
- Draft of the National Action Plan for Energy Efficiency (NEEAP, 2012),
- Energy Development Strategy of the Republic of Srpska (2010),
- Law on Energy Efficiency (2013),
- Law on Spatial Planning and Construction (2013),
- Strategy for Development of Banja Luka in the period from 2007-2015 (revised in 2012),
- Sustainable Energy Action Plan of the City of Banja Luka (SEAP, 2009).

J.2 Links to other mitigation actions <Pls enter/select NAMA ID>

K Attachments:

K.1 Attachment description Supporting documents:

- Short textual description of NAMA project (doc., pdf.),

- Technical documentation of the building project (pdf.),

- Presentation material from *Carbon Forum Asia* 2015 in Macao (China) where the NAMA project was presented in session called *NAMA market* (pdf.).

K.2 File Browse

L Support received

L.1 From outside the Registry

The first phase of the construction works are already finished and total cost were 2 926 549,68 EURO provided by University of Banja Luka and Government of Republic of Srpska.

L.2 From within the Registry

Source	Amount	Date