WP 3.6 Purchase and installation of equipment

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v.02	06/09/2021	Finale version	Pakeza Drkenda (UNSA)

List of abbreviations

WB   Western Balkans

WP	Work package
UNSA	University of Sarajevo
UNMO	University "Džemal Bijedić" of Mostar
UDG	University Donja Gorica
UP	University of Prishtina
UXZ	University "Haxhi Zeka" of Peja
UNIBO	University of Bologna
SWUAS	South Westphalia University of Applied Sciences
UL	University of Ljubljana

Introduction WP 3 "Developing capacities and facilities": General description and objectives

WP 3 "Developing capacities and facilities" aims to deliver the activities necessary to implement new curriculum and LLL programs at partners HEIs.

Based on curricula drafts (D2.1), the WP3 report on teaching/training infrastructure and the level of teachers' knowledge and skills needed to meet defined learning outcomes enables partner HEIs to perform internal assessments (D1.7.).

Report D1.7 is used to design teachers training and study visits at program HEIs in order to assure that teaching staff from partner HEIs can experience UA study program for themselves and enable good practice knowledge transfer face-to-face with respect to the modules introduced in curricula.

WP3 PBL and EL in competence based learning teachers training and Distance learning guide, manual and workshop aims to enable teaching staff with knowledge necessary to implement curriculum.

WP3 produced guides for students and manuals for staff will enhance curriculum implementation and enable mutual understanding of process.

Providing equipment necessary to deliver hands-on experience for partners HEI, according to the number and types of modules introduced in new curricula, will enable practice oriented learning process.

WP will design/purchase and provide new textbooks, tutorials, scripts and other teaching tools for partners HEI according to the number and types of modules introduced in new curricula.

Deliverable 3.6: Purchase and installation of equipment

According to the project planned activities Equipment (laboratory equipment, supplements for agriculture machinery, glasshouses and greenhouses, IT and other specialized equipment, agricultural and horticultural tools) necessary for the practical education for master studies and LLL programs were purchased. Equipment will be provided to partner HEIs according to modules they have introduced in their new curricula and according to the eport delivered in D1.7. Program HEIs will have steering role. Beyond this project, equipment will be used for other educational purposes as well, if possible. Equipment will also be used, with mutual agreements, by individuals and/or businesses for developing/testing innovations and R&D products.

Purchasede and installated equipment

Equipment purchase partially changed in relation to the planned in the context of a) reducing the number of desktop computers (UNSA and UNMO) since covid-19 pandemic caused major problems in the computer market in BA (prices have risen and delivery times have been extended); b) The specification of UDG University greenhouses has been changed and harmonized with the environmental conditions in Podgorica and the possibilities of hiring companies that deal with this specific equipment in ME (there is no company specialized in greenhouse construction in ME, the available budget was not

sufficient for all originally planned equipment), a covid pandemic slowed the tender procedure; c) Damages of the Greenhouse and greenhouse equipment were caused by Natural Disaster (strong winds and storm) in Peja (XK) and Mostar (BA). Money for sensors and computer equipment for UHZ was used to repair the damaged greenhouse in XK and instead of buying sensors for UNMO, money was used for repairing the damaged greenhouse equipment. All these changes were approved by EACEA project officer.

4 Greenhouses and 5 sets of accompanying equipment are installed in Sarajevo, Mostar, Peja, Pristina and Donja Gorica (since UNMO had its own greenhouse only additional equipment was bought for them). Computers and printers are bought in 2021 for UNSA, UNMO and UP. All equipment is used for classes in the master programme in UA, LLL training for practical work and by teachers for testing innovation and scientific and research work. Greenhouses and accompanying equipment are also used by staff and students in all three cycles at partner institutions. It was also used as a tool for horticultural therapy with disabled students in Sarajevo. It will be used in the future in the same capacity.

UNSA: a) Steel greenhouse with polycarbonate sheets, gable design, roof and side openings 30%, 300 m2, vertical NFT hydroponic system (100m2); Ebb and Flow Tables rolling benches (70m2); Automatic adjustable hydroponic pH and EC Controller Unit with 2 reservoirs; Rooftop organic pot production system w. irrigation 200 m2; Composting bin; Waterproof Full Spectrum LED lights for plants 500 m; Miscellaneous tools for agriculture and greenhouse irrigation and electricity system; Solar energy panels 2 kW, b) Notebook- 4 pcs, printers- 2pcs, External disk-1pc; c) Arduino kit for greenhouse (indoor and outdoor) use- 2 pcs; d) books-20 pcs

UNMO: a) Vertical NFT hydroponic system 100m2; Ebb and Flow Tables rolling benches, aluminium 100m2; Waterproof Full Spectrum LED lights for plants 250m; Automatic adjustable hydroponic pH and EC Controller Unit with 2 reservoirs; Rooftop organic pot production system with irrigation 160 m2; Composting bin; Solar energy panels 1,5 kW; Open-source electronic prototyping platform with various microcontrollers; b) Notebook- 4 pcs, PC- 1 pc;

UDG: Glass Greenhouse with accompanying equipment 96 m2, Growing systems in irrigated containers; Irrigation systems; Screening systems; Automatic PC climate control meteo station; Lighting system; electricity system; Garden shed and gardening tools

UP and UHZ (greenhouse configuration): a) Steel greenhouse with polycarbonate sheets, gable design, roof and side openings 30%, 350 m2; Miscellaneous tools for agriculture and greenhouse irrigation and electricity system; Ebb and Flow Tables rolling benches, aluminium-100m2; Rooftop organic pot production system w. irrigation 200 m2; Composting bin, Waterproof Full Spectrum LED lights for plants 500m; Automatic adjustable hydroponic pH and EC Controller Unit with 2 reservoirs; Solar energy panels 1,5 kW;

UP: b) Notebook- 3 pcs, printers- 2pcs; c) Arduino kit for greenhouse (indoor and outdoor) use- 2 pcs