

## **QUALITY REPORT ON ACADEMIC ACHIEVEMENT**

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### **A) SOURCES OF INFORMATION FOR THE REPORT:**

1. Project documentation: Application, Intermediate and draft-Final Reports
2. Project indicators of achievement: outcomes and reports
3. Standard Operating Procedure of the EAEVE
4. FVMB's Self-Evaluation Report and EAEVE experts' CSV Report
5. Preliminary results of the Survey
6. Interviews with Project leading personal

### **B) BREAFF OVERVIEW OF THE STATE OF THE VETERINARY EDUCATION AND PROFESSION IN SERBIA PRIOR TO TEMPUS EDUVET**

Worldwide veterinary profession is a regulated profession that plays the crucial role in the fields of animal medicine and welfare, public health and food safety. Despite the results of OIE analysis done in 2012 that graded overall Serbian veterinary service with 4 out of maximally possible 5 points, veterinary profession still has to improve on many points to fully satisfy the modern criteria of veterinary practice, one of the most prominent being a too high number of veterinary graduates in the economy with stagnating agricultural production. Consequently, freshly graduated veterinarians have to face the risk of unemployment, which makes the veterinary profession less attractive/popular among the secondary school students. The level of cohesion and communication between veterinary schools, state and professional institutions and practitioners was not always instrumental in solving this problem. Field of veterinary education is also burdened with inherited problems i.e.: classical (outdated) "per schedule" clinical teaching system that cannot guarantee that every student has the same opportunity to reach needed "day-one competences" at graduation; permanently insufficient investment, outdated equipment, insufficient animal case-flow and low autonomous revenue; low competitiveness and quality of potential students at enrollment and high enrollment quotas paradoxically leading to a high drop-out rates and too many veterinarians at the same time. Finally, during socially and politically turbulent period in 90-ies, the international exchange of students and teachers had fell to an unsatisfactory level.

## **C) ASSESSMENT OF ACTIVITIES AND ACHIEVEMENTS IN PROJECT DEVELOPMENT WORK PACKAGES (WPs)**

### **WP1 (DEV): Upgrade of graduate veterinary curricula at FVMB and DVMNS in compliance to EAEVE standards, with special emphasis on "veterinary clinical teaching" methodology**

#### Activities:

To improve the current situation it was a necessary to do a restructuring of the graduate veterinary curricula at FVMB and DVMNS. FVMB Curriculum was modified and accredited at national level in 2009, primarily in academic years 4-6, modulated as to allow for the introduction of clinical rotations in core curriculum and four orientation areas. During the TEMPUS EDUVET project life-cycle it was tested and corrections are being implemented in clinical work/teaching methods and system of medical documentation. DVMNS followed with the adoption of the six-year curriculum, accredited and launched in 2014, so that the old five-year curriculum is in its exiting stage, while the new six-year curriculum still didn't close the complete studies cycle.

The new approach should allow for students to achieve standard knowledge and competences which meet the formal approval of RS faculties at the EU level. Veterinary students at their final (6th) year of study were assigned to TEMPUS EDUVET exchange program exclusively according to their previous academic achievements and language skills.

For the purpose of modernization and optimization of working conditions at veterinary institutions, modern equipment and other facilities necessary for work improvement was procured through EDUVET at FVMB and DVMNS alike. It consists of medical/diagnostic equipment, equipment for diagnostic laboratories, IT equipment and books.

#### Results and comments:

Veterinary courses of both vet schools were accredited by the appropriate national accreditation body which is the legal prerequisite for students to be enrolled.

FVMB started the process of formal international evaluation/approval by EAEVE which is probably a unique case in Serbian academic community in this moment. In-depth analysis outlaid in the Self-Evaluation Report, together with EAEVE experts findings and recommendations given in Site Visitation Report, presented the clear path which must be followed in the future development of the institution. Veterinary curricula and clinical teaching methodology is being adopted according to EAEVE standards, however there is still place for modifications to balance the number of teaching hours between theoretical, practical and clinical subject and to reduce teacher-students contact hours opening space for more time for self learning. New model of clinical documentation is being introduced to integrate expected increase in animal case-flow and evidence that students attended and completed their clinical training. Although the enrollment quotas cannot be reduced at the moment, the number of prospective candidates to be enrolled in veterinary courses increased significantly in numbers and quality.

Two clear avenues for progress presented themselves by FVMB/EAEVE analysis:

- improvement in the organization of clinical teaching system and the quality of premises and
- reduction of veterinary students enrollment quotas to further increase the competitiveness.

While both vet schools successfully addressed the first through WP1 of the EDUVET project, the second is still elusive since it requires very delicate negotiations with state educational authorities.

#### Further suggestions for future developments:

Even though the cooperation with the Veterinary Administration and Veterinary Chamber of the Republic of Serbia in the field of continuing education is good and in progress, much better cooperation still needs to be achieved with National and Specialist Veterinary Institutes. The participation of the Institute in veterinary practical teaching offers the significant widening of the veterinary teaching base for both vet schools, henceforth the preparation and execution of programs with increased quality and interest for students.

### **WP2 (DEV): Development of 5 specialist courses required by Serbian Law on Veterinary Matters**

#### Activities:

Existing Serbian veterinary legislation predicted five obligatory types of specialization: Veterinary Epidemiology, Pathological Morphology, Microbiology and Immunology, Animal Reproduction and Food Safety. However, the list of competences for those professional profiles were not defined. Under TEMPUS EDUVET project, FVMB and the Veterinary Directorate (VD) jointly defined the list of essential competences for 5 specialist profiles, and accordingly, FVMB created new curricula for each specialist field. Curricula included theoretical lessons and practical training and learning outcomes.

Today, veterinary specialist courses have been implemented as a part of continuing education. Since the number of needed specialists is dependent primarily (but not exclusively) on the needs of state veterinary institutes, DV bared in mind FVMB capacities, define the conditions as well as the minimal number of enrolled student in each academic year. First generation of specialist graduated and second was enrolled in October 2016. It is a mandatory course in the regular program required for specialist profiles listed in the Serbian veterinary law. The target group for specialist courses were employees in public veterinary civil services, including Ministry of Agriculture and Veterinary Scientific and Specialist Institutes, in order to enhance their professional skills in the field. Faculty Council adopted curricula and teaching methods used for specialist courses before the courses started. Teaching material for study was available to the students in the form of presentations where teachers presented updated information about specific subjects. Assessment of students' satisfaction with the courses were conducted at the end of each semester and jointly analyzed by FVMB and VD.

### Results and comments:

FVMB task force defined curricula of new veterinary specialist courses for each specialist field. The curricula include theoretical lessons, practical training and learning outcomes. The definition of competences and launch of 5 courses should bring the marked increase in the quality of veterinary services in the future.

### Further suggestions for future developments:

In order to improve the quality of specialist teaching and practical knowledge in the teaching process, that process should include experts from the Veterinary Scientific and Specialist Institutes as well as the capacity of these institutions have. There are indications that the new Veterinary Law (in preparation) should include additional specialist profiles. One step forward towards the top of the veterinary profession for both vet schools should be to take necessary steps to enter the European web of veterinary specialist colleges.

## **WP3 (DEV): Development of the undergraduate course "Organic Livestock Production" at EUSK**

### Activities:

Organic Livestock Production has become the current tendency in the world and Serbia has all the necessary natural resources for its development. Decision on launching Organic livestock course at the Faculty of Ecological Agriculture was given by the Senate of EUSK. This Course was planned to last 4 years. After finishing the Course, students will acquire title BSc in Agriculture, in the field of Biotechnical Sciences. Since in Serbia there is no undergraduate course that was exclusively focused on OLP, European models of OLP courses were used as a starting point to define the EUSK undergraduate course curriculum, modules, syllabi, ECTS and learning outcomes.

For that education, under TEMPUS EDUVET project teaching material was identified and prepared stepwise. All provided necessary teaching equipment and capital textbooks/journals and teaching material will include, handouts, various electronic records and lab material would be prepared ahead of the beginning of each academic year.

First generation of students was enrolled in June 2016, and the course started in October 2016/17. Four new teachers have been employed at EUSK specially for this course. Teachers were exchanged between RS and EU faculties (whose education programs cover OLP).

### Results and comments:

In Serbia where small family farms still make a significant portion of the overall livestock production organic livestock production, if the farmers were successfully guided towards it, the possibility should open for significantly higher profitability of their farms.

The study program has a valid diploma in our country and with the diploma supplement it should be recognized in foreign countries. In this way the experts will emerge who will in the future be able to adequately direct and control this type of production.

#### **WP4 (DEV): Survey: "Present state of the veterinary profession in Serbia and vision for the future"**

##### Activities:

The current situation of the veterinary profession in Serbia was the subject of research conducted by FVMB and VCS in 2016. The survey questionnaire was carefully designed and jointly adopted by all key stakeholders in order to obtain relevant information enabling appropriate analyses. Data were collected from field veterinarians, as well as those employed in state vet services, education, food industry etc. Collected data were statistically analyzed, generalized and interpreted.

##### Results and comments:

Among other, the analysis has shown that there are many veterinarians who are unemployed or not working in the profession and pointed out the need to review the quotas of students enrolled annually and their harmonization with the real needs of veterinary labor market.

##### Further suggestions for future developments:

Veterinary faculties and other relevant stakeholders wrote and are in the process of publishing the strategic study "Present state of the veterinary profession in Serbia and vision for the future" containing data and conclusions from the survey. Based on the existing strategy and analysis supposed to the future regulate this issue as well as in other countries where the veterinary profession are more respected.

#### **WP6 (DISS): Dissemination**

##### Activities:

Dissemination methods used, comprised numerous activities, i.e.: project Web-page, annual organized visits of high-school, middle school, and pre-school children to FVMB; actions that target younger generation students; direct contacts of veterinary teachers and students with citizens on publicly organized events; professional symposia; media releases etc.

##### Results and comments:

Due to the complex nature of the project beneficiary faculties had to reach several goals throughout the dissemination campaign: the competitiveness of enrolment process in numbers and quality of potential new students, which is visible through the fact that in 3 years the number of interested candidates for 150 places at FVMB had raised from 175 in 2013 to 274 in 2016; vet teachers and present students had been motivated to

actively participate in the reform of veterinary education which is visible by the number of persons who actively contributed to the project; animal patient case-flow had increased since the analysis done in 2014 for the self-evaluation report; key stakeholders in veterinary education and profession had been motivated for more coherent cooperation which is visible by the investment of the Regional Government of Vojvodina in the newly opened veterinary clinic at the University of Novi Sad campus; there is a stronger presence of Serbian veterinary education and profession in wider public.

#### **D) GENERAL ASSESSMENT OF TEMUS EDUVET PROJECT IMPACT ON THE VETERINARY EDUCATION AND PROFESSION IN SERBIA AND RESULTS SUSTAINABILITY**

The project has created the necessary conditions for future international approval of veterinary establishments by EAEVE; further increase in animal case flow in clinics to accommodate appropriate "day-one skills" for veterinary graduates; introduction of more veterinary specialists profiles; significant widening of teaching bases, construction of new "polyclinic" building at FVMB; application for state and EU development funds; stronger cooperation between all stakeholders in veterinary education and practices and increase the number of students in organic livestock production.

Main avenues of progress in this respect should be: the overall increase in clinical veterinary cases which is a precondition for a successful clinical rotation system, 24 hour emergency clinic, extramural and mobile clinic, and increased number of cases in pathology and modern veterinary specialist courses and novel course in organic livestock production. Given the complexity of the problems that TEMPUS EDUVET project started to resolve it is difficult to predict what exact problems might arise in the future development and implementation of its results. Constant underinvestment, the pace of regulatory changes in a transition society, occasional discrepancies between general policies and specific needs of the vet education may be the source of problem. However, properly coordinated, the cooperation of all the relevant institutions should permit this reform to be carried out within reasonable deadlines and with a high degree of quality.



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