

POSSIBLE CONTRIBUTION OF CASA TEMPUS PROJECT TO AQUACULTURE EDUCATION AND PRACTICE

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DOPRINOS CASA TEMPUS PROJEKTA OBRAZOVANJU I PRAKSI U OBLASTI AKVAKULTURE

O projektu CaSA

Izgradnja kapaciteta srpskog obrazovanja u oblasti poljoprivrede radi povezivanja sa društvom (CaSA) 544072-TEMPUS-1-2013-1-RS-TEMPUS-SMHES (2013 – 4604 / 001 - 001) je projekat iz grupe Strukturnih Mera (SM) finansiran od strane EACEA (Izvršna agencija za obrazovanje, medije i kulturu) u pozivu za TEMPUS projekte iz 2013. godine. Prioriteti za poslednji poziv za TEMPUS projekte su bili: visoko obrazovanje i društvo, obuka ne- univerzitetskih nastavnika i celoživotno učenje (lifelong learning, LLL).

Projekat je osmišljen da obezbedi neophodne obuke glavnih aktera poljoprivrednog obrazovanja : univerzitetskih nastavnika (UT), nastavnika stručnih predmeta u srednjim poljoprivrednim školama (AMS) i savetodavaca u poljoprivrednim stručnim savetodavnim službama (PSSS). Nadalje, predviđeno je osnivanje Nacionalnog repozitorijuma za poljoprivredno obrazovanje, NaRA (Poleksić et al. 2014). U takvom repozitorijumu/riznici znanja će biti smešteni i dostupni svi, za poljoprivredu, relevantni sadržaji. NaRA će biti interaktivna platforma jer će, osim dokumenata sadržati i kurseve, klasične i onlajn, koji će biti na raspolaganju nastavnicima i savetodavcima. Kreiranje kurseva predviđenih za NaRA je aktivnost pripremljena kroz obuke za savremene metode aktivnog učenja/nastave i e-učenja za univerzitetske i nastavnike srednjih škola. Takođe, akademske i komunikacione veštine su uključene u obuke za profesionalce u poljoprivrednom obrazovanju.

Pod «relevantnim sadržajem» koji će biti pohranjen na NaRA podrazumeva se čitav spektar dokumenata - baza podataka i informacija vezanih za savremenu i održivu praksu u svim oblastima poljoprivrede, kao što su: naučni i stručni časopisi koje izdaju poljoprivredni fakulteti učesnici CaSA projekta, zbornici radova i apstrakata skupova koje pomenuti fakulteti organizuju, izveštaji nacionalnih projekata koje finansira Ministarstvo prosvete, nauke i tehnološkog razvoja i Ministarstvo poljoprivrede i zaštite životne sredine, kao i sadržaji relevantni za razvoj profesionalnih veština – akademskih, učenja/nastave, komunikacijskih i upravljačkih.

U projektu CaSA učestvuje 13 partnerskih institucija: 5 univerziteta (4 državna i 1 privatni), udruženja srednjih škola područja rada poljoprivrede, proizvodnje i prerade hrane, Institut za primenu nauke u poljoprivredi, 2 organizacije koje obavljaju obuku, Ministarstvo prosvete, nauke i tehnološkog razvoja i 3 partnerska univerziteta iz EU (Maribor, Temišvar i Foggia). Projektom rukovodi Univerzitet u Beogradu, Poljoprivredni fakultet. CaSA ima 11 radnih paketa koji uključuju: obuke, nabavku opreme, uspostavljanje NaRA (stvaranje virtuelne platforme sa onlajn kursevima i širokom bazom podataka), osnivanje Savetodavnog Odbora NaRA, kreiranje kurseva, njihova implementacija i podnošenje kurseva za akreditaciju/sertifikaciju i na kraju obavezne radne pakete: obezbeđenje kvaliteta, diseminacija rezultata projekta i upravljanje projektom.

Potrebe i mogući doprinos CaSA oblasti akvakulture

Odgovor na pitanje « na koji način CaSA TEMPUS projekat može da doprinese obrazovanju i praksi akvakulture? » leži u samoj ideji repozitorijuma – riznice znanja svih oblasti poljoprivrede i mogućnosti stručnog usavršavanja/osvežavanja znanja koje projekat nudi tokom i posle njegove realizacije.

Činjenica je da je akvakultura u Srbiji, kao i u celom svetu, delatnost koja je u usponu. U našoj zemlji postoje šaranski i pastrmski ribnjaci (Marković i Poleksić, 2009). Ukupna proizvodnja riba je oko 15000 tona. Proizvodnja šarana u Srbiji je u poslednjoj dekadi porasla od 5500 tona do preko 12000 t (Marković i sar. 2013). Iako proizvodnja šarana u Srbiji po podacima Zavoda za statistiku Republike Srbije predstavlja samo 1 – 1,5 % ukupnog obrta u proizvodnji u poljoprivredi, šumarstvu i akvakulturi, postoji ogroman potencijal za značajno veći doprinos proizvodnje riba srpskoj (poljo)privredi. Povrh toga tehnologija i proizvodnja hrane za ribe, prerada ribe, promet i druge aktivnosti vezane za akvakulturu zahtevaju obrazovane stručnjake sposobne da prate najnovija dostignuća nauke i prakse u akvakulturi.

Nažalost, mora se istaći da akvakultura praktično ni ne postoji u ponudi kurseva za stručno usavršavanje nastavnika srednjih stručnih poljoprivrednih škola. Što se može videti na sledećim stranicama: <http://katalog2015.zuov.rs/Program2015.aspx?katbroj=891&godina=2014/2015>, <http://katalog2015.zuov.rs/Program2015.aspx?katbroj=896&godina=2014/2015>

Takođe, akvakultura je gotovo "nevidljiva" na web portalu Savetodavne stručne službe: prosečno se pojavljuje samo 1 post godišnje koji se tiče bilo kakvog gajenja riba (po jedan post u 2015, 2013, 2012, 2009 i 2 posta u 2011. godini) (http://www.psss.rs/e107_plugins/forum/forum_viewforum.php?4.125).

Pomenuti prioriteti za TEMPUS projekte se u potpunosti mogu primeniti i na oblast akvakulture. Obrazovanje i njegove veze sa proizvodnjom vodenih organizama mogu biti značajno unapređeni u Srbiji, tako da aspekti upotrebe sistema koji uspostavlja CaSA projekat i NaRA, nacionalni repozitorijum, mogu da se iskoriste za unapređenje sektora akvakulture. Među oko 60 kurseva koji se, tokom projekta, pripremaju od strane univerzitetskih nastavnika, oko 20 kurseva mogu biti korisni za oblast akvakulture, tj. proizvodnju vodenih organizama, njihovu preradu, promet i/ili kvalitet vode.

Ključne reči: TEMPUS projekat, akvakultura, NaRA, stručno usavršavanje

About the CaSA project

Building Capacity of Serbian Agricultural Education to Link with Society, CaSA, 544072-TEMPUS-1-2013-1-RS-TEMPUS-SMHES (2013 – 4604 / 001 - 001) is a Structural Measures (SM) project funded by EACEA (Education, Audiovisual and Culture Executive Agency) under the 2013 Call for TEMPUS projects. Priorities for this, last call of TEMPUS projects, were: Higher Education (HE) and society; training of non university teachers; and lifelong learning (LLL).

The project is conceived to make necessary trainings of main players of agricultural education: university teachers (UT), agricultural vocational secondary/middle school (AMS) teachers and advisors in Agricultural advisory services; and subsequently to establish a National Repository for Agricultural education, NaRA (Poleksić et al. 2014). In such a repository all relevant content for agriculture will be placed, and NaRA will be an interactive platform since it will contain courses, classical and online that will be taken by AMS teachers and advisors. Creation of courses foreseen for NaRA is the activity prepared by trainings: in modern teaching methodology of active teaching/learning (ATL) and eLearning. These trainings were provided to UT and AMS teachers. In addition academic and communication skills were also in the list of trainings for professionals involved in agricultural education.

Under "relevant content" to be placed in NaRA, a broad spectrum of data bases and information, all linked to modern and sustainable practice in all areas of agriculture is identified: scientific and professional journals published by agricultural faculties participating CaSA, Proceedings and Books of Abstracts from meetings organized by these faculties, reports from national projects supported by Ministries of Education, Science and Technological Development and of Agriculture and Environmental Protection, as well as content relevant to development of professional skills - academic, teaching, communication, and management.

There are 13 partner institutions in CaSA: 5 Universities (4 state and one private), the Association of Agricultural Middle Schools, the Institute for Science Application in Agriculture, 2 training organizations, the Ministry of Education (ME), and 3 EU partners Universities (Timisoara, Maribor and Foggia). The project is coordinated by the University of Belgrade. CaSA consists of 11 work packages that include: trainings; equipment purchase; establishment of NaRA, both construction of the virtual platform and its functionalities; NaRA Advisory Board establishment, courses creation, implementation and submission for accreditation/certification; and finally compulsory work packages: quality assurance - QA, dissemination and project management.

Needs and possible CaSA contribution to Serbian aquaculture sector

The answer to the question "How can CaSA TEMPUS project contribute to aquaculture education and practice?" lays in the very idea of knowledge repository for all areas of agriculture and the possibilities of knowledge refreshment offered by the project during and after its lifetime.

The fact is that aquaculture is in Serbia as well an emerging agricultural practice. In Serbia there are trout and carp farms (Marković and Poleksić, 2009). Total fish production is approximately 15 000 tons. Carp production in Serbia increased from 5 500 t to over 12 000 tons in the past decade (Markovic et al. 2013). Although carp production in Serbia represents only 1 – 1.5 % in the total turnover of agricultural production, forestry and

aquaculture, according to the Statistical Office of the Republic of Serbia, there is a great potential for significantly higher contribution of fish production in Serbian agriculture. In addition fish feed production and technology, fish processing, trade, and other aquaculture related activities need educated professionals able to follow newest achievements of aquaculture research and practice.

Unfortunately, it must be emphasized that aquaculture is practically nonexistent among courses offered to teachers teaching professional subjects in secondary agricultural schools. <http://katalog2015.zuov.rs/Program2015.aspx?katbroj=891&godina=2014/2015>, <http://katalog2015.zuov.rs/Program2015.aspx?katbroj=896&godina=2014/2015>.

Aquaculture is as well almost not visible at all at the web portal of Serbian Agricultural Advisory Service: a single post concerning aquaculture and/or fishery appears approximately once a year (one in 2015, 2013, 2012, 2009, and 2 in 2011) (http://www.psss.rs/e107_plugins/forum/forum_viewforum.php?4.125).

All the above mentioned priorities for TEMPUS projects call apply for the aquaculture sector. Both education and its link to production in aquaculture could be improved in Serbia, therefore aspects of the use of a system established by the CaSA project and NaRA creation will be used for improvements in the aquaculture sector. Among approximately 60 CaSA courses under preparation by UTs, there are about 20 courses that might be useful for aquaculture i.e. linked to aquaculture production, processing or trade, and/or water quality.

Keywords: TEMPUS project, aquaculture, NaRA, in-service training

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