

REPORT

for the follow up project titled “**Capacity Building for Analysis and Reduction Measures of Persistent Organic Pollutants in Serbia**”

Experts from Japan visit, January 2016



Dr. Vladimir P. BEŠKOSKI

Prof. Dr. Takeshi NAKANO

January 2016,

BELGRADE, SERBIA

MEMBERS OF THE EXPERT GROUP
FROM JAPAN WHO VISITED SERBIA IN JANUARY 2016

Experts from Japan (who visited Serbia under the auspices of the Project):

1. Prof. dr. Takeshi NAKANO, Osaka University and Hyogo Environmental Advancement Association
2. Dr. Yasuhiro KANDA, Hyogo Prefectural Institute of Environmental Sciences (director)
3. Dr. Toshiki FUJII, Hyogo Environmental Advancement Association, Kobe, Japan

Representative of JICA Kansai

1. Ms. Akiko NISHIHARA, JICA Kansai, Japan

ACTIVITIES REALIZED IN SERBIA PRIOR ARRIVAL OF EXPERTS
FROM JAPAN

1. Courtesy call for experts from Japan and representative of JICA Kansai at Faculty of Chemistry, University of Belgrade (FCUB) and meeting with the Prof. Ivan Gržetić, Dean of FCUB was scheduled for Monday, January 18, 2016 (12:00h).
2. Meeting with the members of the Project from University of Belgrade was scheduled for Monday, January 18, 2016 (13:00-16:00h).
3. Courtesy call and meeting with Mr. Aleksandar Vesić, Deputy Minister, Ministry of Agriculture and Environmental Protection of Republic of Serbia (Sector for the planning and management of the environment) was scheduled for Tuesday (10:00-11:00h) (Annex 1).
4. Visit to Serbian Environmental Protection Agency (SEPA) and meeting with Mr. Filip Radović, Director of SEPA and Mr. Zoran Stojanović, Head of environmental laboratory in SEPA was scheduled for Tuesday (12:00-16:00h).
5. Meeting with the members of the Project from Pančevo city and representatives of Pančevo industrial zone (Oil refinery, Petrochemical industry and Fertilizer company) was scheduled for Wednesday, January 20, 2016 (10:00-14:00h).
6. Workshop in Pančevo for Pančevo city officers, high school professors from Pančevo, individual agricultural producers, representatives of the Pančevo industrial zone, citizens, Institute Tamiš, SEPA. The workshop was scheduled for Thursday, January 21, 2016 (10:00-15:00h). Invitation letter was distributed to more than 50 e-mail addresses. (Annex 2).
7. Meeting with representatives of the high schools from Pančevo (Economic and trade High school "Paja Marganović") and Schools which students from Pančevo attend (Agricultural high school from Futog, and Agricultural high school from Vršac) was scheduled for Friday, January 22, 2016 (10:00-14:00h).
8. Visit to Institute of Molecular Genetics and Genetic Engineering (IMGGE), University of Belgrade was scheduled for Saturday, January 23, 2016 (10:00-14:00h).

ACTIVITIES REALIZED IN SERBIA DURING VISIT OF EXPERTS FROM JAPAN

Saturday, January 16, 2016

ACTIVITIES PLANNED

- Departure from Japan for Prof. Takeshi NAKANO and Ms. Akiko NISHIHARA
- Arrival at Belgrade airport of Prof. Takeshi NAKANO
- Arrival at Belgrade airport of Ms. Akiko NISHIHARA

ACTIVITIES REALIZED

- Prof. NAKANO had arrived according to the plan, flight number TK 1083,19:15h Saturday, January 16 (Fig 1.) Ms. NISHIHARA was welcomed by representatives of JICA Balkan office.



Fig 1. Prof. Nakano arrival to Belgrade airport

Sunday, January 17, 2016

ACTIVITIES PLANNED

- Departure from Japan for Dr. Yasuhiro KANDA and Dr. Toshiki FUJII
- GCxGC-MS analysis at Faculty of Chemistry, University of Belgrade - FCUB (presentation - GCxGC-MS - Vladimir Beškoski)

ACTIVITIES REALIZED

- At FCUB, Dr. Vladimir BEŠKOSKI had gave presentation titled " Comprehensive GCxGC-MS, training, usage, experience at FCUB" to Ms. NISHIHARA and Prof. NAKANO (Fig 2 & 3) (Annex 3). After presentation, analysis of the sample of agricultural soil from Pančevo city polluted with pesticide dichloro-diphenyl-trichloroethane (DDT) whose usage is prohibited, was conducted using GCxGC-MS (Sample PA-2). Results were the same as previously analyzed at FCUB and repeatability was confirmed. Results of analysis are given in Annex 4.

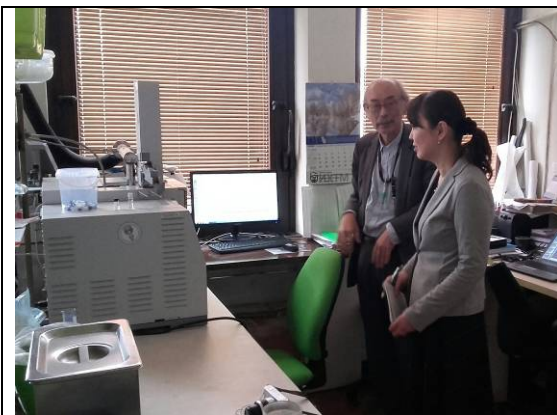


Fig 2. Ms. Nishihara and Prof. Nakano at FCUB, GCxGC laboratory



Fig 3. GCxGC-MS installed at FCUB

Monday, January 18, 2016

ACTIVITIES PLANNED

- Meeting with the representatives of JICA Balkan office (10:00h) (Taxi) (Belgrade)
- Meeting with Prof. Ivan Grzetic, dean of FCUB, (12:00-13:00) (FCUB, Belgrade)
- Meeting with project members from FCUB (13:00 - 16:00) (FCUB, Belgrade) Library of the FCUB.

ACTIVITIES REALIZED

From 10:00h to 11:00h courtesy call at JICA Balkan office was held. At the meeting representatives of JICA Balkan office in Serbia Mr. Toshiya ABE, resident representative of the JICA Balkan Office and his deputy Mr. Ryohei ANZAI. welcomed colleagues from Japan Prof. NAKANO, Dr. KANDA, Dr. FUJII, representative from JICA Kansai, Ms. NISHIHARA, and Serbia Dr. Vladimir P. BEŠKOSKI (Fig 4 & 5). They all expressed mutual satisfaction regarding past and ongoing activities and future perspective of the grassroot Project and collaboration between institutions from Japan and Serbia. Prof. NAKANO had presented activities planned for

this visit. Mr. ABE was interested in the Project and possibilities for future collaboration and possible Phase II of this Project.



Fig 4. Meeting in JICA Balkan office with Mr. Abe and Mr. Anzai



Fig 5. After the meeting in JICA Balkan

From 12:00-13:00h meeting with the Dean of the FCUB, Prof. Ivan Gržetić was held at FCUB (Fig 6). As on before meetings, the mutual satisfaction with the Project development was expressed. Dean of FCUB pointed out that Prof. Nakano and experts from Japan can count on FCUB and its capacities now and in the future.



Fig 6. Meeting with Prof Gržetić, dean of FCUB

Following the meeting with the Dean of FCUB, meeting with the members of the Project from University of Belgrade was held at the library of FCUB. On that meeting, former participants of the training held in Japan in 2014, dr. Mila ILIĆ and dr. Jelena MILIĆ had presented realization of their action plans (Annex 5 & 6). The next presentation titled "PROJECT UNDER JICA PARTNERSHIP PROGRAM "CAPACITY BUILDING FOR ANALYSIS AND REDUCTION

MEASURES OF PERSISTENT ORGANIC POLLUTANTS IN SERBIA” – ACTIVITIES RELEASED IN 2014/2015" was given by Project coordinator for Serbia, dr. Vladimir P. BEŠKOSKI (Annex 7). Dr. Beškoski stressed out that until now, within the Project, the following activities with participation of experts from Japan had realized in Serbia:

- 22 Lectures given by experts from Japan
- 3 Workshops for researchers from University of Belgrade
- 2 Workshops for farmers and residents of Pančevo city
- 1 Workshop for representatives from industrial zone from Pančevo
- 2 Popular Science events for high school and University students
- 3 Round table meetings with more than 40 participants each
- 6 High school visits

History of GCxGC-MS usage at FCUB:

- The Instrument was installed in 2014.
- In March 2015 we had a two weeks training for GC-MS. Researchers who attended this training from FCUB and Institute of Chemistry, Technology and Metallurgy (IChTM): Dr Vladimir Beškoski (FCUB), Dr Mila Ilić (IChTM), Dr Jelena Milić (IChTM), Dr Gordana Gojgić-Cvijović (IChTM), Dr Tanja Šolević (IChTM), Dr Ljubodrag Vujisić (FCUB), Aleksandra Djurić (FCUB), Marija Lješević (FCUB).
- In September 2015 we had a one week training for GCxGC-MS usage: Researchers who are trained to use GCxGC-MS: Dr Vladimir Beškoski (FCUB), Dr Mila Ilić (IChTM), Dr Jelena Milić (IChTM), Dr Gordana Gojgić-Cvijović (IChTM), Dr Tanja Šolević (IChTM), Dr Ljubodrag Vujisić (FCUB), Aleksandra Djurić (FCUB), Marija Lješević (FCUB).
- Present operators on GCxGC-MS: Dr Vladimir Beškoski, Aleksandra Djurić (PhD student), Marija Lješević (PhD student) and Dr Srdjan Miletić
- Total time operated on GCxGC-MS is more than 500 hours.
- Number of samples analyzed until January 2016 is more than 700.

Pančevo city officials and researchers from University of Belgrade who visited Japan:

1. Mr. Vladimir DELJA, Member of the City Council of Pančevo City, in charge for environmental protection and sustainable development
2. Ms. Olga ŠIPOVAC, Secretary of Environmental Protection division of Pančevo City
3. Ms. Biljana Đordan, Environmental Protection division of Pančevo City - inspector
4. Ms. Vesna PETKOVIĆ-BOROVNICA, Environmental Protection division of Pančevo City - inspector
5. Dr. Mila Ilić, Institute of Chemistry, Technology and Metallurgy - researcher
6. Dr. Jelena MILIĆ, Institute of Chemistry, Technology and Metallurgy - researcher
7. Prof. dr. Miroslav M. Vrvic, Faculty of Chemistry – full professor
8. Prof. dr. Branimir JOVANČIĆEVIĆ, Faculty of Chemistry – full professor

Also, dr BEŠKOSKI, pointed out that Action plans from 2014 training are finished and that Action plans from 2015 are presently in realization.

Final presentation titled "Chemical Management by Business Operators in Japan - An Outline of Japanese PRTR System" was given by dr. Yasuhiro KANDA (Annex 8). At the meeting Project members from nine institutions took participation. List of the participants at the meeting is given in Annex 9 and photos from this event at Fig 7-10.



Fig 7. Dr. Mila Ilić is giving talk about realization of her action plan



Fig 8. Dr. Kanda is giving lecture about Pollutant release and transfer register in Japan

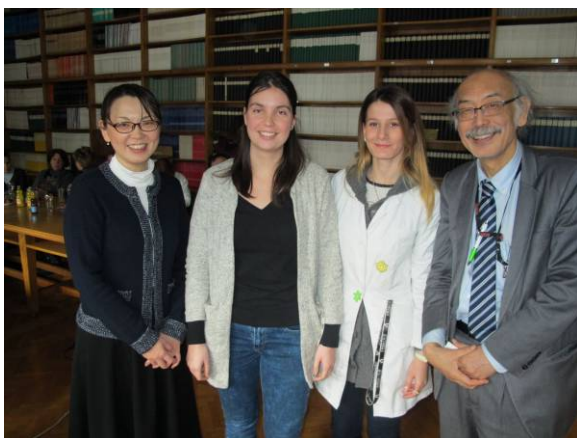


Fig 9. Ms. Nishihara and Prof. Nakano with GCxGC-MS operators and PhD students Marija Lješević and Aleksandra Djurić



Fig 10. Joint photo after meeting at FCUB

Tuesday, January 19, 2016

ACTIVITIES PLANNED

- Meeting with representative of the Ministry of Agriculture and Environmental Protection of Republic of Serbia (Mr. Aleksandar Vesic, Deputy Minister, Sector for the planning and management of the environment) (10:00-11:00h)
- Visit to Serbian Environmental Protection Agency - SEPA (12:00 - 16:00h)

ACTIVITIES REALIZED

Courtesy call at the Ministry of Agriculture and Environmental Protection of Republic of Serbia and meeting with Deputy Minister Mr. Aleksandar Vesić, was held as planned (Fig 11-12). At that meeting, Deputy Minister confirmed importance of this Project for Government of Serbia and residence of Pančevo city. He stressed out that this Project is also helping fulfill some parts of the Update of the National Implementation Plan of Stockholm Convention on POPs chemicals, and that representatives of the Ministry are ready to cooperate and help in realization of our Project. One more time he expressed his satisfaction with this Project, especially since he was participant of one JICA training held in 2004 at Kitakyushu University in Japan.



Fig 11. Meeting with Mr. Aleksandar Vesić
Deputy Minister



Fig 12. Joint photo at the Ministry of
Agriculture and Environmental Protection of
Republic of Serbia

After this meeting, visit to SEPA was conducted. Before meeting with SEPA director, a visit to SEPA laboratories was conducted. Our hosts were Director of SEPA Mr. Filip Radović and Head of environmental laboratory, Mr. Zoran Stojanović (member of our Project). The aim of visit to SEPA was to discuss about plan for future soil monitoring system in Pančevo city and

inclusion of the Agency to the next phase of the project. During the meeting, discussion about importance of the contribution of the Government of Japan through the donation of equipment, transfer of knowledge and results gained from previous projects were pointed out (Fig 13-14). Details about this visit can be found at SEPA web page (Annex 10).

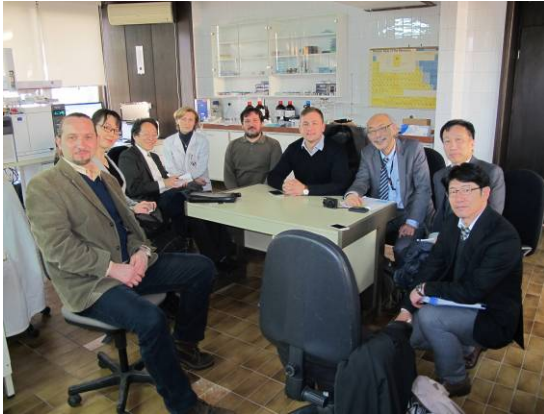


Fig 13. Meeting in SEPA with Director and Head of environmental laboratory



Fig 14. Meeting in SEPA

ADDITIONAL ACTIVITY

In the evening, meeting with movie director and professor from the Faculty of Dramatic Arts, University of Belgrade Miloš Pavlović and professor of informatics Ante Čurlin was organized. On this meeting, use of new softwares and communication technologies was discussed in order to easy up in the future communication between experts from Japan and researchers from Serbia, as well as between high schools and their students from two countries (Fig 15-16).



Fig 15. Meeting with Prof. Miloš Pavlović



Fig 16. Meeting with Mr. Ante Čurlin

Wednesday, January 20, 2016

ACTIVITIES PLANNED

- Meeting with project members in Pancevo city and representatives of the Industry in Pancevo, (10:00-14:00h)

ACTIVITIES REALIZED

The meeting was held in the Pančevo city hall and besides experts from Japan (Prof. NAKANO, Dr KANDA, Dr FUJII), representative of JICA Kansai (Ms. NISHIHARA), members of the Project from FCUB (Dr BEŠKOSKI) and Pančevo city (Ms. Olga ŠIPOVAC, Mr. Vladimir DELJA, Ms. Biljana DJORDAN, Ms. Vesna PETKOVIĆ-BOROVNICA, Mr. Milan GLUMAC), also representatives of Pančevo industrial zone, Institute Tamiš and Pančevo Public Health Institute were present:

1. Ms. Iboja RAŠA, HIP Petrochemistry (environment protection department)
2. Saša BOROZANOVIĆ, HIP Petrochemistry (environment protection department)
3. Gordana VASOJEVIĆ, HIP Fertilizer factory (environment protection department)
4. Staniša BRANKOV, NIS Gaspromnjeft (Pančevo Oil Refinery) (environment protection department)
5. Djordje KOMNENOV, NIS Gaspromnjeft (Pančevo Oil Refinery)
6. Aleksandra KLJAJIĆ, NIS Gaspromnjeft (Pančevo Oil Refinery)
7. Ljiljana LAZIĆ, Pančevo Public Health Institute (director)
8. Maja SUDIMAC, Institute Tamiš
9. Nikola ŠKRBIĆ, Institute Tamiš (director)

On this meeting discussion on stronger involvement of companies from Pančevo within the Project were discussed. Colleagues from the industry had presented most important environmental issues regarding historical pollution in their companies. The biggest problems are pollution of ground waters with Vinyl chloride monomer, Ethylene dichloride, Mercury. Representatives of the HIP Petrochemistry expressed willingness to organize in the future lecture/presentation which will be given by experts from Japan in their company. Director of the Pančevo Public Health Institute showed great interest to organize joint workshop for Pančevo city residents under our Project. As a conclusion, three aspects were highlighted: soil monitoring, sanitation/remediation and education of the workers, who are also residents of Pančevo city (Fig 17-20).



Fig 17. Meeting in Pančevo city hall



Fig 18. Meeting in Pančevo city hall



Fig 19. Pančevo city officers and experts from Japan



Fig 20. Joint photo with representatives from Pančevo industry

Thursday, January 21, 2016

ACTIVITIES PLANNED

- Workshop in Pancevo for Pancevo city officers, high school professors from Pančevo high schools, individual agricultural producers, representatives of the Pančevo industrial zone, citizens, Institute Tamiš, SEPA) (10:00-15:00h)

ACTIVITIES REALIZED

The workshop titled "Persistent organic pollutants in the environment - the situation in Pančevo" was carried out according to the following schedule:

Opening Ceremony

10:00-10:05h Mr. Saša PAVLOV Pančevo city Major.

10:05-10:10h Mr. Anzai RYOHEI representative of JICA Balkan office.

10:10-10:20h Ms. Akiko NISHIHARA, representative of JICA Kansai.

10:20-10:30h Mr. Ivan DJURIĆKOVIĆ, from the Ministry of Agriculture and Environmental Protection of Republic of Serbia had read the letter of regards sent by the Deputy Minister Mr. Aleksandar Vesić.

Presentations

10:30-11:00h Review of the implementation of the Stockholm Convention in the Republic of Serbia, Ivan Đuričković, a national contact person for the Stockholm Convention, the Chemicals Department, Ministry of Agriculture and Environmental Protection (on Serbian) (Annex 11)

11:00-11:30h The communication strategy and raising awareness of POPs chemicals in accordance with the draft of the updated National Implementation Plan to implement the Stockholm Convention, Alexander Rašović, Department of Chemicals, Ministry of Agriculture and Environmental Protection (on Serbian) (Annex 12)

11:30-12:00h The transposition of the Directive of the European Parliament and the Council no. 2004/35 on environmental liability with regard to the prevention and remediation of environmental damage in national legislation, Tina Janjatović Department for Normative Affairs and harmonization of regulations in the field of environment, Ministry of Agriculture and Environmental Protection (on Serbian) (Annex 13)

12:00-12:30 Coffee break

13:00-13:30h Mr. Vladimir Delja, JICA participants presentations - realization of Action plans (on Serbian) (Annex 14)

13:40-14:00h Dr. Jelena Milić, JICA participants presentations (on Serbian) (Annex 15)

14:00-15:00 Dr. Vladimir BEŠKOSKI & Prof. Takeshi NAKANO - Results on agricultural soil analysis conducted at FCUB and Japan (monitoring result) (metals and pesticides, PCBs, PAHs, phosphate flame retardants) (on Serbian and English) (Annex 16)

Workshop was organized by Pancevo city officers, for high school professors from Pančevo high schools, individual agricultural producers, representatives of the Pančevo industrial zone, citizens, Institute Tamiš, SEPA) (Fig 21-24). List of the audience is given in Annex 17.



Fig 21. Opening ceremony



Fig 22. Addressing of Ms. Nishihara



Fig 23. Audience at the workshop



Fig 24. Presentation of the Aleksandra Rašović from Ministry of Agriculture and Environmental Protection



Fig 25. Prof. Nakano and Dr. Beškoski presentation



Fig 26. Prof. Nakano is giving interview to Radio Television of Serbia

Media coverage of the workshop was excellent. During and after workshop, experts from Japan, and representatives from Pančevo city, FCUB and Ministry gave interview to journalist from Radio television of Pančevo (Annex 18), Radio television of Vojvodina (Annex 19) and Radio television of Serbia (equivalent to NHK in Japan). Also, journalist from newspaper Vecernje Novosti wrote one article about workshop (Annex 20)

Friday, January 22, 2016

ACTIVITIES PLANNED

- Meeting with representatives of the high schools from Pančevo (Economic and trade High school "Paja Marganović") and Schools which students from Pančevo attend (Agricultural high school from Futog, and Agricultural high school from Vršac) (10:00-14:00h).

ACTIVITIES REALIZED

Visit to High school from Pančevo (Economic and trade High school "Paja Marganović") and meeting with representatives of Agricultural high school from Futog, and Agricultural high school from Vršac, which students from Pančevo city attend was realized as planned. The purpose of the visit was to enhance collaboration between schools and to give support high school professors from Pančevo and surrounding cities (Fig 27 & 28). During the meeting with professors, vcube video conference with prof. Takaoka KAE from high school from Kakogawa was held. After the meeting, high school students gave tour guide around Pančevo city to experts from Japan. As a result of this visit, Pančevo Statement was produced, the document which should increase collaboration between high schools in Pančevo and Vojvodina area (Annex 21). Also, Ratio television from Pančevo had reported about importance of this visit and support of Japan for high schools in Pančevo regarding environmental protection (Annex 22).



Fig 27. With the students of High school "Paja Marganović" in Pančevo



Fig 28. Guest from Japan and high school professors from Pančevo, Futog and Vršac

Saturday, January 23, 2016

ACTIVITIES PLANNED

- Visit to Institute of Molecular Genetics and Genetic Engineering (IMGGE), University of Belgrade (10:00-14:00h).
- Departure from Serbia (20:00h) (Belgrade)

ACTIVITIES REALIZED

Visit to IMGGE was held according to the plan. Experts from Japan (Prof. NAKANO, Dr KANDA and Dr FUJII) and Project coordinator from Serbia (Dr BEŠKOSKI) were welcomed by IMGGI director Dr. Jelena BEGOVIĆ, Dr. Aleksandra NIKOLIĆ, Dr. Dragica RADOJKOVIĆ, Dr. Sanja Jeremić and Dr. Ivana MORIĆ (Fig 29 &30). Director of the IMGGI held a presentation about activities of the Institute and during the meeting discussion about how IMGGI can help our Project to achieve all goals and how to improve life of the residents from Pančevo city. Furthermore, discussion about collaboration in the future was held. Details about the visit are posted on IMGGI web page (Annex 23).



Fig 29. Meeting in IMGGI

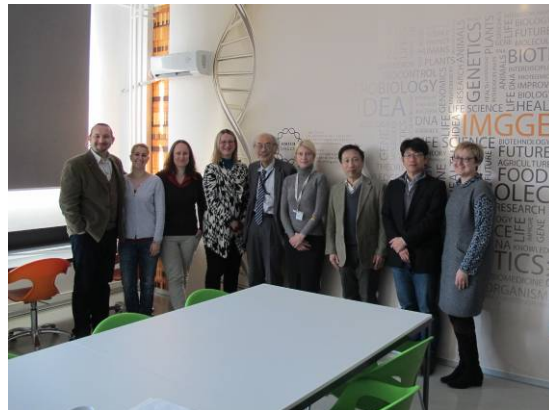


Fig 30. At the IMGGI

As planned, Prof. dr. Takeshi NAKANO, Dr. Yasuhiro KANDA, and Dr. Toshiki FUJII had left Serbia with the flight number TK 1084 (20:20h) from the airport "Nikola Tesla" in Belgrade.

Belgrade, January 28, 2016