

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/February 2017



Dr. Vladimir P. BEŠKOSKI

Prof. Dr. Takeshi NAKANO

January/February 2017,

BELGRADE, SERBIA

MEMBERS OF THE EXPERT GROUP
FROM JAPAN WHO VISITED SERBIA IN JANUARY/FEBRUARY
2017

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

ACTIVITIES REALIZED IN SERBIA PRIOR ARRIVAL OF EXPERTS
FROM JAPAN

1. Plan of activities was prepared prior arrival of experts from Japan (Annex 1).
2. Meeting in HIP Petrochemical Company with representatives of the company and representatives of the Pančevo city and Ministry of Agriculture and Environmental Protection of the Republic of Serbia was scheduled for Friday, January 27, 2017 (12:00h).
3. Meeting with the members of the Project from Pančevo city was scheduled for Monday, January 30, 2017 (10:00-12:00h).
4. Meeting with the director of Public utility company "Greenery" in Pancevo was scheduled for Monday, January 30, 2017 (13:00-15:00h).
5. Final Symposium of the Project 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 Tuesday, January 31, 2017 (10:00-14:00h). Invitation letter was distributed to more than 100 e-mail addresses (Annex 2).
6. Meeting with the director of Public utility company "Hygiene" in Pancevo was scheduled for Wednesday, February, 1, 2017 (10:00-11:00h).
7. Workshop in Regional Chamber of Commerce in Pancevo city about chemical management in Japan and experience with PRTR system in Japan was scheduled for Wednesday, February, 1, 2017 (12:00-16:00h).). Invitation letter was distributed to more than 50 e-mail addresses (Annex 3).
8. Meeting with representatives of the high schools from Pančevo (Economic and trade High school "Paja Marganović") and lecture for high school students was scheduled for Thursday, February, 2, 2017 (10:00-14:00h).
9. Courtesy call in JICA Balkan office was scheduled for January 10, and later postponed for Thursday, February, 2, 2017 (15:00-17:00h).
10. Final meeting with the members of the Project from Faculty of Chemistry, University of Belgrade (FCUB) and Institute of Chemistry, Technology and Metallurgy (IChTM), University of Belgrade and was scheduled for Friday, February, 3, 2017 (10:00-15:00h).

ADDITIONAL ACTIVITIES REALIZED IN PANČEVO RELATED TO ENVIRONMENTAL PROTECTION REALIZED BETWEEN TWO VISITS OF EXPERTS FROM JAPAN (Nov. 2016 - Jan. 2017)

1. Sampling of the soil samples collected from municipal waste landfills from Pančevo city and surrounding villages (9 landfill locations), (Polycyclic Aromatic Hydrocarbons-PAHs, Polychlorinated Biphenyls-PCBs, Total Petroleum Hydrocarbons-TPH)
2. Analysis of the soil samples collected from municipal waste landfills from Pančevo city and surrounding villages.
3. Passive air sampling in Užice city
4. Analysis of the samples from Užice city (PAHs, PCBs)
5. Collection and preparation of material needed for the application for Phase II of collaboration between Japan and Serbia.
6. Several meetings at the FCUB, Pančevo city and HIP Petrochemical company.

ACTIVITIES REALIZED IN SERBIA DURING VISIT OF EXPERTS FROM JAPAN

Thursday, January 26, 2017

ACTIVITIES PLANNED

- Arrival of Prof. Nakano and Dr. Kanda and Dr. Fujii at the Belgrade airport.

ACTIVITIES REALIZED

- Prof. Nakano and Dr. Kanda and Dr. Fujii had arrived according to the plan, flight number LH1406, 12:15h.
- Meeting of Prof. Nakano and Dr. Kanda and Dr. Fujii with the Project coordinator from Serbia, Dr. Vladimir Beskoski from FCUB was held from 14:00-18:00h. At the meeting it was discussed about planned activities during this visit (Fig. 1).



Fig 1. Prof. Nakano, Dr. Kanda and Dr. Fujii and Dr. Beskoski at the meeting

Friday, January 27, 2017

ACTIVITIES PLANNED

- 12:00 – 16:00 Meeting in HIP Petrochemical Company (working meeting to discuss about phase II)

ACTIVITIES REALIZED

- From 12:00 – 16:00 meeting in HIP Petrochemical Company (working meeting to discuss about phase II) was held (Annex 4). At that meeting experts from Japan and Dr. Vladimir Beškoski, representative of FCUB were present. In front of Petrochemical Company, director Mr. Saša Borzanović, and Ms. Jelena Dimitrijevska, person in charge for environmental protection were the representatives of HIP Petrochemistry. In front of Ministry of Agriculture and Environmental Protection of the Republic of Serbia, Mr. Ivan Djuričković and Ms. Nada Lukačević. In front of Regional Secretariat for Environmental Protection, Ms. Svetlana Marušić who is in charge for Integrated Pollution Prevention Control (IPPC) license for HIP Petrochemical company was present. In front of Pančevo city, Ms. Katarina Banjai and Ms. Ljiljana Krčedinac were present. In front of Grammar School “Uroš Predić” from Pančevo director of the School, Mr. Vladimir Marić was present. In front of Regional Center for gifted kids, Mr. Dragoljub Cucić and in front of nongovernmental organization “Odras” Mr. Živa Žebeljan were present. At the beginning of the meeting all participants gave their view about Phase 2 of Japan-Serbia collaboration. Mr. Borzanović, present in details history of the company and history of pollution. This was followed by discussion about forthcoming activities in HIP Petrochemical Company. Everybody agreed that one of the main outcomes from Phase 2 should be analysis of the pollution in the HIP Petrochemical company and production of the study which will describe the best available technologies for remediation of polluted environment. It was emphasized that HIP Petrochemical company should participate in the Phase 2 with additional 10% from the total sum of the Project and Pančevo city symbolically with 1%. Representatives from The Ministry, pointed out that Ministry will support future activities and that they are very positive, regarding this collaboration. Ms. Marušić, pointed out that this collaboration will help HIP Petrochemical company to speed up the process of getting the IPPC license and that this is very important in the light of the process of Serbia joining to European Union (Fig. 2-5).



Fig. 2. Meeting in HIP Petrochemistry



Fig. 3. Meeting in HIP Petrochemistry



Fig. 4. Meeting in HIP Petrochemistry



Fig. 5. Meeting in HIP Petrochemistry

Saturday, January 28, 2017

ACTIVITIES PLANNED

- Analysis of the samples from Pančevo at FCUB using GCxGC-MS and evaluation of the personal trained (09:00-17:00h)

ACTIVITIES REALIZED

- From 9:00-17:00h Prof. Nakano, Dr. Kanda and Dr. Fujii had a chance to evaluate skills of the researchers from FCUB and IChTM. The samples from municipal landfills from Pančevo were extracted and then analyzed using GCxGC-MS procured by the Project. Researchers who participated (Ms. Marija Lješević, Dr. Srdjan Miletić, Dr. Mila Ilić) demonstrated their skills to use instrument and software for the analysis of the Persistent Organic Pollutants (POPs) such as PCBs and PAHs. Evaluation of their skills is given in Annex 5. Also, experts from Japan had meeting with Prof. Branimir Jovančićević (Fig. 6).



Fig. 6. Meeting with Prof. Jovančićević

Sunday, January 29, 2017

ACTIVITIES PLANNED

- Analysis of the samples from Užice at FCUB using GCxGC-MS and evaluation of the personal trained (09:00-17:00h)

ACTIVITIES REALIZED

- From 9:00-17:00h Prof. Nakano, Dr. Kanda and Dr. Fujii had a chance to evaluate skills of the researchers from FCUB and IChTM. The samples from passive air sampling campaign in Užice were extracted and then analyzed using GCxGC-MS procured by the Project. Researchers who participated (Dr. Jelena Milić, Ms. Aleksandra Djurić and Ms. Branka Kekez) demonstrated their skills to use instrument and software for the analysis of the Persistent Organic Pollutants (POPs) such as PCBs and PAHs. Evaluation of their skills is given in Annex 5.

Monday, January 30, 2017

ACTIVITIES PLANNED

- 10:00 Meeting in Pancevo city hall with members of the Project from Pančevo city
- 12:00 – 15:00 Meeting in Public utility company “Greenery” Pancevo (discussion about joint activities in Ponjavica in the Phase II)

ACTIVITIES REALIZED

- From 10:00-12:00h meeting in Pancevo city hall with members of the Project from Pančevo city. Dr. Fujii gave presentation about main activities from the Phase 1 which were realized in the last three years of the Project. Ms. Katarina Banjai, City council member in charge for environmental protection and sustainable development, pointed out that as a result of the present Project, Pančevo will now start working yearly monitoring of the agricultural soil and the funds are already provided, and that the public procurement for the accredited laboratories who will work will be announced in the spring of 2017. Pančevo city is very interested to continue with this collaboration because the benefit for the residence of Pančevo and the surrounding settlements was enormous. Project gave benefit and knowledge not only to Pančevo city officials, but also to individual agricultural producers who followed education on safe disposal of pesticide containing containers, to high school students, industry as well as nongovernmental and nonprofit organizations from this region of Serbia. They hope that in the future after Phase 1 and we hope Phase 2 we will be able to conduct remediation in whole industrial zone of Pančevo which will increase the quality of life of all residence in Pančevo, but also Serbia in whole (Fig. 7-8).



Fig. 7. Dr. Fujii is giving presentation in Pančevo city



Fig. 8. Members of the Project from Pančevo city at the meeting

- From 12:00-14:00h meeting in Public utility company “Greenery” Pancevo was held. In front of this company, director Mr. Danilo Bjelica, Ms. Jelena Batinić and Ms. Ženja

Marinković attended the meeting. In front of Pančevo city, Ms. Katarina Banjai, Ms. Ljiljana Krčedinac and Ms. Zdenka Miljković (new Secretary of the Secretariate for Environmental Protection) and from HIP Petrochemical company Mr. Saša Borzanović attended the meeting. Experts from Japan Prof. Nakano, Dr. Kanda and Dr. Fujii and Dr. Beškoski from FCUB emphasized their plans for the Phase 2 of this collaboration and discussion about natural protected area Ponjavica prevailed. Mr. Bjelica expressed his sincere willingness to participate in the Phase 2 and that he and his company will support sampling campaign in Ponjavica and also all planned activities. At the meeting one of the ideas were to organize open lectures and education for High School and University students, so that they can learn some basic in field analytical techniques, as well as to learn more about environmental protection. Since there are many protected birds in this natural protected area also discussion about Toyoka city and their experience and activities on Oriental stork protection and possibility that they can help in restoration of Ponjavica was emphasized (Fig. 9-10).



Fig. 9. Meeting in PUC Greenery



Fig. 10. Meeting in PUC Greenery

Tuesday, January 31, 2017

ACTIVITIES PLANNED

- 10:00h Final Symposium in Pancevo City 10:00

ACTIVITIES REALIZED

- From 10:00-14:00h a Final Symposium of the Project “Capacity Building for Analysis and Reduction Measures of Persistent Organic Pollutants in Serbia” was held. The Program of the Symposium distributed together with the Invitation letter is given in Annex 6. The time table was:

10:00 - 10:30h Opening:

- Mr. Saša Pavlov, Pančeva city Major
- Mr. Ivan Djuričković, representative of the Ministry of Agriculture and Environmental Protection and focal point for Stockholm convention and POPs chemicals of the Republic of Serbia
- Mr. Anzai Ryohei, deputy of the resident representative, JICA Balkan office

- Prof. dr. Ivan Gržetić, dean of the Faculty of Chemistry, University of Belgrade
- Dr. Tadashi Iwane, president of the board of directors of Hyogo Environmental Advancement Association (letter)

Presentations:

10:30 - 11:00h	Ms. Katarina Banjai, Pančevo city Ms. Olga Šipovac, Pančevo city
11:00 -11:30h	Mr. Vladimir Delja, Economic and trade High school "Paja Marganović" Ms. Biljana Djordan, Pančevo city
11:30 - 12:00h	Ms. Vesna Borovnica, Pančevo city Ms. Saša Borzanović, HIP Petrochemical Company
12:00 -13:00h	Dr. Toshiki Fujii Dr. Vladimir Beškoski, FCUB Prof. dr. Takeshi Nakano, Osaka University
13:00 - 14:00h	discussion and poster presentations

At the Symposium, all representatives from Pančevo city, FCUB, IChTM and HIP Petrochemical Company presented successful realization of their action plans which they produced while attending training in Japan in 2014, 2015 and 2016 (Fig. 11-28). Action plans of the representatives from University of Belgrade Prof. dr. Miroslav M. Vrvic, Prof. dr. Branimir Jovančičević, Dr. Mila Ilić and Dr. Jelena Milić, were given in the form of posters (Fig. 29-32). At the Symposium, there were more than 60 people in the audience, representatives of the Industry, Pančevo city, NGO, NPO, High Schools from Pančevo. The final conclusion was that this Project gave important benefit to the residents of Pančevo city and that this collaboration should continue. Media coverage was excellent and more than 10 reports were published in the newspapers, media web pages and TV stations in Serbia (Annex 7).



Fig. 11. Mr. Saša Pavlov, Mayor of Pančevo



Fig. 12. Audience at the Symposium



Fig. 13. Mr. Anzai giving opening speech



Fig. 14. Audience at the Symposium



Fig. 15. Mr. Djuričković giving opening speech



Fig. 16. Prof. Gržetić giving opening speech



Fig. 17. Prof. Nakano is reading Dr. Iwane letter

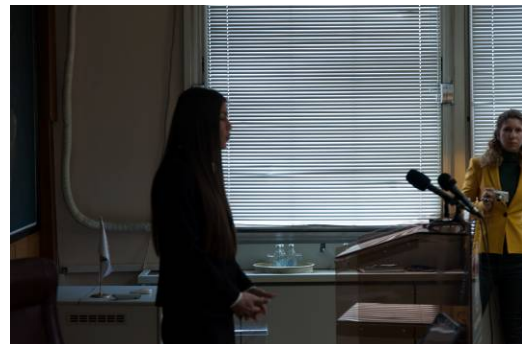


Fig. 18. Ms. Banjai presentation



Fig. 19. Ms. Šipovac presentation



Fig. 20. Mr. Delja presentation



Fig. 21. Ms. Borovnica presentation



Fig. 22. Mr. Borzanović presentation



Fig. 23. Dr. Fujii presentation



Fig. 24. Prof. Nakano presentation



Fig. 25. Dr. Beškoski presentation



Fig. 26. Experts from Japan in Pančevo



Fig. 27. Prof. Nakano is giving interview to Radio Television of Serbia



Fig. 28. Dr. Beškoski is giving interview to Radio Television of Serbia



Fig. 29. Prof. Vrvic action plan

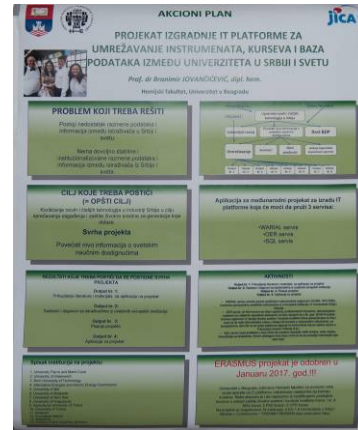


Fig. 30. Prof. Jovančičević action plan



Fig. 31. Dr. Ilic action plan

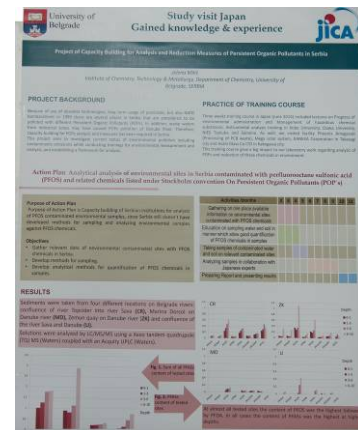


Fig. 32. Dr. Milić action plan

Wednesday, February 01, 2017

ACTIVITIES PLANNED

- 10:00-11:00 Meeting with representatives of the Public Utility Company “Hygiene”.
- 12:00-15:00 Workshop in Regional Chamber of Commerce – Topic “Chemical Management by Business Operators in Japan”

ACTIVITIES REALIZED

- From 10:00-11:00h meeting with representatives of Public Utility Company “Hygiene” was held. In front of PUC “Hygiene”, director Mr. Bogdan Savić together with his colleagues Marija Savić, Jovanka Dakić, Darko Todorović, gave presentation about landfills in Pančevo from which samples were collected in autumn 2017 by members of the Project and analyzed using GCxGC-MS. We agreed that in the Phase 2 special attention should be given to old municipal waste landfill in Pančevo which will be closed soon.
- From 12:00-15:00 Workshop in Regional Chamber of Commerce in Pančevo (RCCP) – Topic “Chemical Management by Business Operators in Japan” was held. Dr. Kanda gave presentation titled “Chemical Management by Business Operators in Japan - An

Outline of Japanese PRTR System”. At the audience we had representatives from Industrial zone of Pančevo (HIP Petrochemical Company, Fertilizer Company and NIS Gaspromnjeft) as well as more than 30 representatives from small and medium enterprises who work with chemicals but would also like to collaborate with companies from Japan. Prof. Nakano and experts from Japan also gave talk about companies from Hyogo Prefecture that were engaged in the realization of our training in Japan, who were supporting our project and are willing to collaborate with companies from Serbia (Fig. 33-38). Media also reported about this workshop (Annex 8).



Fig. 33. Meeting in RCCP with president Mr. Dragan Bosilj



Fig. 34. Ms. Mirjana Balog Kormanjoš is opening workshop



Fig. 35. Dr. Kanda presentation



Fig. 36. Prof. Nakano presentation



Fig. 37. Discussion after presentations



Fig. 38. Audience in RCCP

Thursday, February 02, 2017

ACTIVITIES PLANNED

- 10:00-14:00 Visit to Economic and trade High school "Paja Marganović" in Pancevo City
- 10:00-16:00 Courtesy call in JICA Balkan office

ACTIVITIES REALIZED

- From 10:00-14:00h visit to Economic and trade High school "Paja Marganović" in Pančevo City was held. After meeting with the School Principle Mr. Milan Parausić, Prof. Nakano and Dr. Kanda gave lecture to the students, followed by presentation given by Mr. Vladimir Delja. Prof. Nakano had organized students in the groups and they discussed about environmental protection and special activities which can enable us to have sustainable development (Fig 40-45).



Fig. 40. Mr. Delja is introducing experts from Japan to his students



Fig. 41. Mr. Delja is introducing Japan-Serbia Project



Fig. 42. Dr. Kanda is giving presentation



Fig. 43. Prof. Nakano is giving presentation



Fig. 44. Joint photo with the students



Fig. 45. Meeting with School Principal

- From 15:00-16:00h courtesy call in JICA Balkan and meeting with resident representative, Mr. Toshiya Abe and his deputy, Mr. Ryohei Anzai (Fig. 46). Prof. Nakano present them all activities realized during this visit and all planned activities for the Phase 2. It was concluded that all stakeholders (FCUB, local authorities of Pančevo city, HIP Petrochemical Company, PUC Hygiene and Greenery), but also governmental organizations such as Ministry of Agriculture and Environmental Protection of the Republic of Serbia and Regional Secretariat for Environmental Protection are very

supporting and willing to continue with this important collaboration which should bring more benefit to the residents of Pančevo city, Serbia in whole and also Hyogo Prefecture and their residents.



Fig. 46. Meeting in JICA Balkan Office

Friday, February 03, 2017

ACTIVITIES PLANNED

- Final meeting with representatives from the University of Belgrade

ACTIVITIES REALIZED

- From 9:00-17:00h experts from Japan were on FCUB finalizing inspection of usage of GCxGC-MS. The final meeting with researchers was held between 10:00-14:00h. At the meeting members of the Project from FCUB and IChTM, expressed their readiness to continue with the next Phase and expressed their gratitude to JICA and especially to Prof. Nakano, appreciating energy that he invested in this Project.

Saturday, February 04, 2017

ACTIVITIES PLANNED

- Departure from Serbia of experts from Japan

ACTIVITIES REALIZED

- As planned, Prof. dr. Takeshi NAKANO, Dr. Yasuhiro Kanda and Dr. Toshiki Fujii had left Serbia with the flight number LH1411 (06:55h) from the airport "Nikola Tesla" in Belgrade (Fig. 47).



Fig. 47. Departure from Serbia

Belgrade, February 06, 2017