

REPORT

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

Experts from Japan visit, November 2016



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Prof. Dr. Takeshi NAKANO

December 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. Chisato MATSUMURA, Hyogo Prefectural Institute of Environmental Sciences

ACTIVITIES REALIZED IN SERBIA PRIOR ARRIVAL OF EXPERTS
FROM JAPAN

1. Courtesy call for experts from Japan at JICA Belgrade was scheduled for Thursday, November 24, 2016 (10:00h).
2. Meeting in Pančevo City hall with members of the Project from Pancevo was scheduled for Thursday, November 24, 2016 (12:00h).
3. Meeting with representatives of HIP Petrochemical company in Pancevo was scheduled for Thursday, November 24, 2016 (14:00h).
4. Courtesy call and meeting with representatives of Serbian Chamber of Commerce was scheduled for Friday, November 25, 2016 (09:00h).
5. Meeting in Pančevo City hall with members of the Project from Pancevo, representatives of Pančevo industrial zone (Oil refinery, Petrochemical company and Fertilizer company) and presentation of research survey on underground water in Pancevo was scheduled for Friday, November 25, 2016 (12:00h).
6. Courtesy call and meeting with representatives of Regional Chamber of Commerce in Pancevo was scheduled for Friday, November 25, 2016 (15:00h).
7. Meeting with representatives of the high schools from Pančevo (Economic and trade High school "Paja Marganović"), Vršac (Agricultural school), Futog (Agricultural school) and Belgrade (Gymnasium "Sveti Sava") was scheduled for Monday, November, 28, 2016 (14:00-16:00h).
8. Courtesy call and meeting with the representatives of the Ministry of Agriculture and Environmental Protection of the Republic of Serbia (Mr. Aleksandar Vesić, Deputy Minister) was scheduled for Tuesday, November 29, 2016 (09:00h).
9. Courtesy call with the Principal and visit to primary school "Despot Stefan Lazarevic" in Belgrade was scheduled for Tuesday, November 29, 2016 (17:00h).
10. Meeting with researchers from institute Vinča, University of Belgrade was scheduled for Wednesday, November 30, 2016 (10:00h).

ACTIVITIES REALIZED IN SERBIA DURING VISIT OF EXPERTS FROM JAPAN

Wednesday, November 23, 2016

ACTIVITIES PLANNED

- Departure from Japan for Prof. Takeshi NAKANO and Dr. MATSUMURA

Thursday, November 24, 2016

ACTIVITIES PLANNED

- Arrival at Belgrade airport of Prof. Takeshi NAKANO and Dr. MATSUMURA
- Courtesy call and meeting with the representatives of JICA Balkan office (10:00h) (Taxi) (JICA Balkan office, Belgrade)
- Meeting in Pancevo city (12:00-13:30) (Taxi) (Pancevo city hall)
- Meeting in HIP Petrochemical company (14:00-16:00) (Taxi) (Pancevo)

ACTIVITIES REALIZED

- Prof. NAKANO and Dr. MATSUMURA had arrived according to the plan, flight number TK 1081, 08:20h Thursday, November 24 (Fig 1.)



Fig 1. Prof. Nakano and Dr. Matsumura arrival to Belgrade airport

- 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, together with Ms. Ksenija BANKOVIĆ welcomed colleagues from Japan Prof. NAKANO, Dr. MATSUMURA and Serbia Dr. Vladimir P. BEŠKOSKI (Fig 4 & 5). At the meeting translator Mr. Masahiko

OTSUKA was also present. 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. ANZAI was interested in the Project and possibilities for future collaboration on higher level and Phase II of this Project. It was particularly highlighted the importance of the inclusion of the industrial zone of Pancevo, as well as chambers of commerce in the current cooperation (Fig. 2).

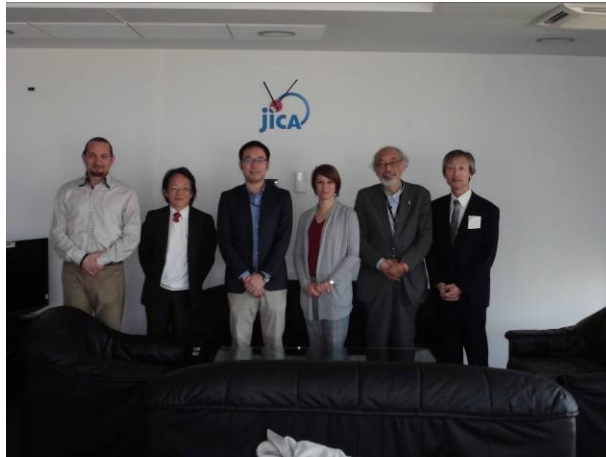


Fig 2. Meeting in JICA Balkan office with Mr. Anzai and Ms. Banković

- Following the meeting with the representatives of JICA Balkan, meeting with the members of the Project from Pancevo city was held in Pancevo city hall. At that meeting Ms. Katarina BANJAI, City Council member in charge for environmental protection and sustainable development wished warm welcome to Serbia and successful stay for experts from Japan. Discussion about phase II of the collaboration prevailed and many interesting ideas as well as suggestions arised (Fig. 3 & 4).



Fig. 3. Meeting in Pancevo city hall



Fig. 4. After the meeting in Pancevo city hall

Following the with the members of the Project from Pancevo city, the meeting in HIP Petrochemical company was held. Besides experts from Japan (Prof. Nakano, Dr. Matsumura), representatives from FCUB (dr. Beškoski), Ms. Ksenija Banković, representative from JICA Balkan and Ms. Banjai, Ms. Šipovac and Mr. Milan Glumac from Pančevo city also attended. In front of HIP Petrochemical company Mr. Miša Bulajić, Executive Director of Production and Technical Support Function, Mr. Saša Borzanović, Director of Project Management Center, Ms. Negica Rajkov, Assistant Manager and Ms. Jelena Dimitrijevska, Head of HSE Department, attended the meeting. Mr. Bulajić emphasized that the company is very interested in collaboration with in phase II of this Project. For the phase II it is planned to conduct sampling and analysis of the various pollution present in the Company and that one of the results of the Project should be Report in which best available technologies for the soil/water/sediment remediation in HIP Petrochemical Company should be written, based on the analyzed samples. With this document HIP Petrochemical Company can apply in the future for the Project for remediation. Mr. Borzanović held a presentation about pollution in the Company based on present knowledge. There are places pollute with both organic and inorganic pollutants and multidisciplinary approach should be used for analysis and interpretation of the analysis results. After the meeting the delegation visited the locations known for their historical pollution in HIP Petrochemical Company (Fig. 5-8).



Fig. 5. Meeting in HIP Petrochemical Company



Fig. 6. Prof. Nakano with Mr. Bulajić, Executive Director of Production and Technical Support Function in HIP Petrochemical Company



Fig. 7. Visit to the polluted locations in HIP
Petrochemical Company



Fig. 8. Polluted location (mainly chlorinated
organic chemicals and Mercury) in HIP
Petrochemical Company

Friday, November 25, 2016

ACTIVITIES PLANNED

- Meeting in Serbian Chamber of Commerce (09:00 - 10:00h) (Taxi) (Serbian Chamber of Commerce, Belgrade)
- Meeting in Pancevo city with members of the project (presentation of results of underground water survey and Lectures of Prof. Nakano and Dr. Matsumura) (12:00 - 14:00h) (Taxi) (Pancevo city Hall, Pancevo)
- Meeting with the representatives of Regional Chamber of Commerce (15:00 - 17:00h) (Taxi) (Regional Chamber of Commerce, Pancevo)

ACTIVITIES REALIZED

From 09:00h to 10:00h courtesy call at Serbian Chamber of Commerce (SCC) was held. In front of SCC, experts from Japan and representative of FCUB were welcomed by Dr. Aleksandar Perić, Advisor to president of SCC, Mr. Aleksandar Kemiveš, Director and Ms. Milanka Stojaković, Advisor at SCC. At the meeting, discussion about collaboration between Japanese and Serbian companies in the field of environmental protection prevailed. It was emphasized that SCC is willing to organize meeting in the future between representatives of the companies from both countries (Fig. 9 & 10).



Fig. 9. Meeting in Serbian Chamber of Commerce



Fig. 10. Exchanging gifts with Dr. Aleksandar Perić, Advisor to president of Serbian Chamber of Commerce

From 12:00-14:00 meeting in Pancevo city and presentation of results of underground water survey in Pancevo city followed by lectures given by Prof. NAKANO and Dr. MATSUMURA was held. The meeting was attended by representatives from Pancevo city and also companies from industrial zone and representative from Pancevo Health Institute Dr. Mirjana OSTOJIN. Dr. BEŠKOSKI presented the data of underground water survey and he emphasized that PAH pollution was below remediation values based on local laws and regulations. Also, PCB was below limit of detection in all analyzed samples. Analyses of perfluorinated compounds revealed elevated levels of these chemicals (especially PFOS) in the close proximity with Oil refinery. It was assumed that this pollution is historical but also that further analysis should be conducted (Fig. 10-13).



Fig. 10. Dr. Beškosi is presenting results



Fig. 11. Prof. Nakano is giving a lecture



Fig. 12. Meeting at Pancevo city hall



Fig. 13. After the meeting in Pancevo city hall

From 15:00-17:00 courtesy call followed by the meeting with the representatives of Regional Chamber of Commerce (RCC) in Pancevo was held. In front of RCC, Mr. Dragan Bosilj, President and Ms. Mirjana Balog Kormanjoš, Secretary of the board for chemical, pharmaceutical industry and energetic welcomed experts from Japan. At the meeting also representatives from Pancevo city and HIP Petrochemical company were also present. Mr. Bosilj, gave a presentation about activities of the RCC and the state of the economy in that area of Serbia. At the meeting representatives from RCC had emphasized that they are willing to organize meeting in RCC during next visit of experts from Japan planned for January 2017 (Fig. 14&15).



Fig. 14. Meeting in Regional Chamber of Commerce in Pancevo



Fig. 15. Exchanging gifts with Mr. Dragan Bosilj, President of the Regional Chamber of Commerce in Pancevo

Saturday, November 26, 2016

ACTIVITIES PLANNED

- GCxGC-MS analysis at Faculty of Chemistry, University of Belgrade - FCUB

ACTIVITIES REALIZED

- At Faculty of Chemistry, University of Belgrade, GCxGC-MS analysis of the samples sampled from municipal landfills from Pančevo city was conducted.

Sunday, November 27, 2016

ACTIVITIES PLANNED

- GCxGC-MS analysis at Faculty of Chemistry, University of Belgrade - FCUB

ACTIVITIES REALIZED

- At Faculty of Chemistry, University of Belgrade, GCxGC-MS analysis of the samples sampled by passive air samples from Užice was conducted.

Monday, November 28, 2016

ACTIVITIES PLANNED

- Prof. Nakano and dr. Matsumura san lecture to FCUB BSc students (10:00-12:00)
- Meeting with representatives of High schools from Pancevo, Belgrade, Vrsac, Futog in Pancevo city (14:00 - 16:00) (Taxi) (Pancevo city Hall, Pancevo)

ACTIVITIES REALIZED

- From 10:00-12:00 Prof. Nakano and dr. Matsumura gave lectures to BSc students from FCUB. They discussed about importance on environmental monitoring, and best available technologies for remediation of the environment polluted by anthropogenic influence. More than 20 students from Department of Environmental Protection at FCUB attended lecture (Fig. 16&17).



Fig. 16. Prof. Nakano is giving lecture to BSc students at FCUB



Fig. 17. Dr. Mastumura is giving lecture to BSc students at FCUB

- Following lecture at FCUB, meeting with representatives of High schools from Pancevo, Belgrade, Vrsac, Futog in Pancevo city was held in Pancevo city hall. At the meeting representatives of high schools from Pančevo (Economic and trade High school "Paja Marganović"), Vršac (Agricultural school), Futog (Agricultural school) and Belgrade (Gymnasium "Sveti Sava") attended. Ms. Marijana Bjelaković from Gymnasium "Sveti Sava" and Aleksandra Žutić from Economic and trade High school "Paja Marganović" gave excellent ideas regarding collaboration between high schools from Japan and Serbia. Some of the ideas were joint celebration of the Earth day, joint exhibition of the students works, Internet conferences... The purpose of the meeting was to enhance collaboration between schools and to give support to high school professors from Serbia. It was concluded that letter to high schools professors from Japan will be sent in order to get their attention and to stimulate this collaboration.

Tuesday, November 29, 2016

ACTIVITIES PLANNED

- Courtesy call and meeting with the representatives of the Ministry of Agriculture and Environmental Protection of the Republic of Serbia (09:00-10:00) (Taxi) (Belgrade)
- Prof. Nakano and dr. Matsumura san lecture to FCUB BSc students (13:00-15:00) (Taxi) (Belgrade)
- Departure from Serbia of Dr. Matsumura
- Courtesy call with the Principal and visit to primary school "Despot Stefan Lazarevic" in Belgrade (17:00-19:30) (Taxi) (Belgrade)

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. Besides Mr. Vesić, also Mr. Ivan Djuričković (Serbian POPs focal point) and colleagues from department in charge for Pancevo industrial zone also join the meeting. In front of JICA Balkan, Mr. Anzai attended the meeting in the Ministry. 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. Furthermore, support from the Ministry for Phase II was received. The members of the Project, informed the Deputy Minister that HIP Petrochemical Company will have important role in the Phase II and Mr. Vesić, expressed his satisfaction with that information, since this is one important company also for the Government of Serbia. If conducted, phase II will help Ministry to increase environmental protection in whole industrial area of Pancevo, but also that part of Serbia (Fig. 18&19).



Fig. 18. Ministry of Agriculture and Environmental Protection of Republic of Serbia



Fig. 19. Exchanging gifts with Mr. Aleksandar Vesić, Deputy Minister of the Ministry of Agriculture and Environmental Protection of Republic of Serbia

- From 13:00-13:00 Prof. Nakano and dr. Matsumura gave lectures to MSc students from FCUB. They discussed about importance on environmental monitoring, and best available technologies for remediation of the environment polluted by anthropogenic influence (Fig. 20&21).



Fig 20. Prof. Nakano is discussing with MSc students at FCUB



Fig. 21. Joint photo after the lecture

- Because of Lufthansa strike, Dr. Matsumura departed from Serbia via Wiena, Austria with flight OS 774.
- From 17:00-19:30h visit to primary school "Despot Stefan Lazarevic" in Belgrade was realized. At the courtesy call with the school principal (Ms. Zorica Zdravković Jovanović) and vice principal (Ms. Marija Pavlović) expressed their enthusiasm and willingness to participate in this cultural exchange program with Japan. From 18:30-19:00 Prof. Nakano and Dr. Beškoski discussed with fifth grade students about importance of environmental protection and they presented culture of Japan. The pupils prepared Christmas and New Year cards for pupils from the counterpart class in Japan which is Yuri Gakuin Elementary School from Amagasaki (Fig. 22-25).



Fig. 22. Meeting with the principal and vice principal of the primary school "Despot Stefan Lazarevic"



Fig. 23. Exchanging gifts with pupils from fifth grade



Fig. 24. Presentation about Japan and environmental protection



Fig. 25. Joint photo after lecture

Wednesday, November 30, 2016

ACTIVITIES PLANNED

- GCxGC-MS analysis at Faculty of Chemistry, University of Belgrade - FCUB

ACTIVITIES REALIZED

- At Faculty of Chemistry, University of Belgrade, GCxGC-MS analysis was continued.
- From 10:00-11:00 meeting with Prof. Aleksandar Popović, previous Minister of Science and Environmental Protection of Republic of Serbia was realized at FCUB. At the meeting, Prof. Popović, emphasized importance of international collaboration (Fig. 26).



Fig. 26. Meeting with Prof. Aleksandar Popović, previous Minister of Science and Environmental Protection of Republic of Serbia

- After FCUB visit to Institute "Vinča", University of Belgrade was realized. At the Institute "Vinča", prof. Nakano had a meeting with Ms. Latinka Slavković Beškoski and members of the Laboratory for Radiation Protection and the Environmental Protection.

Thursday, December 1, 2016

ACTIVITIES PLANNED

- GCxGC-MS analysis at Faculty of Chemistry, University of Belgrade - FCUB
- Departure from Serbia

ACTIVITIES REALIZED

- From 8:00 GCxGC-MS analysis at FCUB was continued.
- Prof. Nakano had left Serbia as planned with flight LH1729 from the airport "Nikola Tesla" in Belgrade.

Belgrade, December 2, 2016