

# REPORT

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

**Experts from Japan visit, June 2016**



**Dr. Vladimir P. BEŠKOSKI**

**Prof. Dr. Takeshi NAKANO**

**June 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. Ryosuke YOSHIKI, Hyogo Prefectural Institute of Environmental Sciences
3. Dr. Atsuro HINO, Hyogo Environmental Advancement Association, Japan

**ACTIVITIES REALIZED IN SERBIA PRIOR ARRIVAL OF EXPERTS**  
**FROM JAPAN**

1. Meeting with the members of the Project from University of Belgrade and lecture of Dr. Yoshiki was scheduled at Faculty of Chemistry, University of Belgrade (FCUB) for Thursday, June 16, 2016 (13:00-16:00h).
2. Lecture at high school "Gymnasium Saint Sava" in Belgrade was scheduled by the courtesy of prof. Marijana Bijeković for Friday, June 17, 2016, 2016 (13:00-14:00h).
3. Visit to Serbian Environmental Protection Agency (SEPA) and meeting with Mr. Zoran Stojanović, Head of environmental laboratory in SEPA was scheduled for Friday, June 17, 2016, (15:00-18:00h).
4. Meeting with the members of the Project from Pančevo city and Symposium in organization of Pancevo city was scheduled for Monday, June 20, 2016 (10:00-14:00h). Invitation letter for the Symposium was sent to more than 200 email addresses.
5. Boat tour for Environmental Education for Pancevo high school students was scheduled for Thursday, June 21, 2016 (10:00-15:00h).
6. Visit to Pancevo industrial zone and meeting with representatives of Fertilizer and Petrochemical company (Pancevo) together with factory tour was scheduled for Wednesday, June 22, 2016 (10:00-13:00h).
7. Visit to nature park in Pancevo (Ponjavica) was scheduled for Wednesday, June 22, 2016 (14:00-18:00h).

**ADDITIONAL ACTIVITIES REALIZED IN PANČEVO RELATED TO**  
**ENVIRONMENTAL EDUCATION AND REALIZED BETWEEN TWO**  
**VISITS OF EXPERTS FROM JAPAN (Jan. - Jun. 2016)**

- Planting of the trees in the framework of international action **ENO tree planting day**, which was launched in September **2015** (March 2016)

- Activities within International action Sjerpinski carpet were continued with video conferences and creating fractals and other models, on the subject of balance in the environment
- More dozens of kilograms of bottle packaging were collected, and funds were used for procurement of carts for immobile children.
- Symposium on the topic of biotechnology, GMOs and the use and abuse of chemistry in medicine, food industry and agriculture, with special assistance from Prof. Ivica Nikola from MIT, USA.
- Campaign for renovation of the school park and park near the school, to help retired people who mainly live here were organized.
- Presentation about our JICA project and collaboration between Serbia and Japan and its meaning for the school and students were organized.
- Association of citizens PEC (Pancevo Eco Center) were formed, as a desire of former Vladimir Delja students who met Professor Takeshi Nakano at the beginning of the project, as well as other colleagues and citizens, who will work on further education which is connection with our JICA Project, its practical realization, or a range of other topics. Honey bee is a symbol of the associations.
- Work of the informal society (association) of students and teachers in the High school eco center (SEC) were restored, and new symbol of the association will be cherry blossom.

## **ACTIVITIES REALIZED IN SERBIA DURING VISIT OF EXPERTS FROM JAPAN**

Wednesday, June 15, 2016

### **ACTIVITIES PLANNED**

- Departure from Japan for Prof. Takeshi NAKANO and Dr. R. YOSHIKI

Thursday, June 16, 2016

### **ACTIVITIES PLANNED**

- Arrival of Prof. Nakano and Dr. Yoshiki at the Belgrade airport.
- Meeting with Project members from FCUB.
- Lecture of Dr. Yoshiki at FCUB

## ACTIVITIES REALIZED

- Prof. NAKANO and Dr. R. YOSHIKI had arrived according to the plan, flight number TK 1081, 08:20h.
- Meeting of Prof. NAKANO and Dr. R. YOSHIKI with the members of the JICA project from FCUB and IChTM were held from 12:00-13:30h.
- Dr. Yoshiki held a presentation at FCUB from 13:30-15:00h.



Fig. 1 Meeting at FCUB



Fig. 2. Dr. R. YOSHIKI is giving a lecture at FCUB

Friday, June 17, 2016

## ACTIVITIES PLANNED

- 13:00-14:00h Takeshi NAKANO Lecture in Belgrade (high school "Gymnasium Saint Sava" in Belgrade).
- 15:00-16:00h Visit to Serbian Environmental Protection Agency

## ACTIVITIES REALIZED

- From 13:00-14:00h Dr. NAKANO , Dr. R. YOSHIKI and Dr. Srdjan MILETIC from IChTM visited high school "Gymnasium Saint Sava" in Belgrade. Many students in this school are from Pancevo and neighboring settlements. Dr. Nakano gave lecture about environmental education and importance of environmental preservation. Furthermore, students were divided in 5 working groups in which they discussed about different case studies given by Dr, NAKANO.
- From 15:00-16:00h Dr. NAKANO , Dr. R. YOSHIKI and Dr. MILETIC visited Serbian Environmental Protection Agency and they had a meeting with Mr. Zoran Stojanović, Head of environmental laboratory. They discussed about pollution of enclosed water bodies in Serbia which are used as a source for preparation of drinking water and pollution of these areas with microcystin from cyanobacteria.



Fig. 3. Prof. Nakano is giving lecture at high school "Gymnasium Saint Sava" in Belgrade



Fig. 4. Students from "Gymnasium Saint Sava" and experts from Japan



Fig. 5. Visit to SEPA



Fig. 6. Meeting at SEPA

Saturday, June 18, 2016

### **ACTIVITIES PLANNED**

- Visit to FCUB and inspection/analysis of trained personnel for independent usage of GCxGC-MS.
- Visit to Great War Island.
- Departure of Dr. Atsuro HINO from Japan.

### **ACTIVITIES REALIZED**

- At FCUB prof. NAKANO had checked the qualifications and skills of Dr. MILETIC for independent analysis using GCxGC-MS. 10:00-13:00h. (PAH and pesticide analysis)

- Visit to Great War Island (protected area in Belgrade) on the confluence of River Danube and Sava and estimation of that state of the environment and preservation. At the island many parasitic (alien invasive) plant species were detected it is emphasized that special attention should be given to these plants (14:00-18:00h).



Fig. 7. Map of Great War Island



Fig. 8. Parasitic plants at Great War Island

Sunday, June 19, 2016

### ACTIVITIES PLANNED

- Arrival of Dr. Hino.
- Visit to FCUB to collect samples from passive air samples and inspection/analysis of trained personnel for independent usage of GCxGC-MS.

### ACTIVITIES REALIZED

- Dr. Hino arrived at the Belgrade airport according to the plan, flight number TK 1081, 08:20h.
- A short meeting with Dr. Vladimir BESKOSKI, project coordinator from Serbia was organized at Hotel Majestic (12:00-13:00h). On that meeting it was discussed about activities planned for next week.
- At FCUB prof. NAKANO had checked the qualifications and skills of Dr. MILETIC for independent analysis using GCxGC-MS. 14:00-17:00h. (PCB analysis). Samples from passive air sampler were collect for further analysis.



Fig. 9. Prof. Nakano and Dr. Miletic conducting GCxGC-MS analysis



Fig. 10. Dr. Yoshiki and Dr. Miletic in front of GCxGC-MS



Fig. 11. Roof of FCUB



Fig. 12. Passive air sampler at the roof of FCUB

Monday, June 20, 2016

### **ACTIVITIES PLANNED**

- Symposium in Pancevo city for individual agricultural producers, citizens, NGO, high school professors, environmental safety members in Pancevo factory

### **ACTIVITIES REALIZED**

- From 10:00h to 14:00h Symposium in Pancevo city, in organization of Pancevo City Environmental protection Secretariat, FCUB and Pancevo Public Health Institute was held.

Title of the workshop: The importance of environmental chemistry in the production of healthy food

Audience: Individual agricultural producers, citizens, NGO, high school professors, environmental safety members in Pancevo factory (50 people)

Location: Pancevo City hall

Lecturers:

1. "Ecology and health" Dr. Radmila JOVANOVIC, specialist in hygiene and environmental protection, Public Health Institute of Pancevo
2. "Products for daily use and monitoring of POPs chemicals" Prof. Takeshi NAKANO (Osaka University)
3. "Activities of Hyogo Prefecture in the field of chemical substances that are not covered by legislation" Dr. R. YOSHIKI (Hyogo Prefectural Institute of Environmental Sciences)
4. "A case study for education in the field of ecology" Mr. HINO, Hyogo Environmental Advancement Association, Japan
5. "Safe disposal of pesticides packaging" Dr. Maja SUDIMAC (Tamis institute, Pancevo)

At the Symposium, it was discussed about environmental protection in general, human health and case studies for education in the field of ecology.

- Meeting with project members from Pancevo city was held after the Symposium on which it was discussed about forthcoming JICA training in Japan and future of our collaboration within this project. The members from Pancevo city who participated at the meeting were Katarina BANJAI (new Pancevo city council member in charge for environmental protection), Vladimir DELJA (old Pancevo city council member in charge for environmental protection) and Olga SIPOVAC, Vesna BOROVNICA, Biljana DJORDAN and Milan GLUMAC.



Fig. 13. Prof. Nakano is giving interview for the Pancevo TV



Fig. 14. Ms. Banjai is opening symposium in Pancevo





Fig. 15. Dr. Jovanovic is giving a lecture at the Symposium in Pancevo



Fig. 16. Prof. Nakano is giving a lecture at the Symposium in Pancevo



Fig. 17. Dr. Yoshiki is giving a lecture at the Symposium in Pancevo



Fig. 18. Dr. Hino is giving a lecture at the Symposium in Pancevo



Fig. 19. Dr. Sudimac is giving a lecture at the Symposium in Pancevo



Fig. 20. Meeting in Pancevo city hall

Tuesday, June 21, 2016

### ACTIVITIES PLANNED

- Boat tour for Environmental Education for Pancevo high school students was scheduled for Thursday, June 21, 2016 (10:00-15:00h).

### ACTIVITIES REALIZED

- Because of heavy storm that severely damaged Pancevo city in Monday, June 20, the boat tour was canceled and Education of high school students was held in Pancevo city. Total of 20 selected students from Agricultural high school from Futog, Economic and trade high school from Pancevo and Chemical - Technology High School Pancevo attended this event. After lectures, students were divided in groups to discuss and present different case studies, regarding environment pollution and preservation. After this event, water sampling on River Tamis was conducted with participation of all students.



Fig. 21. Prof. Nakano is giving lecture at environmental education class in Pancevo



Fig. 22. Audience at the environmental education class



Fig. 23. High school students are working in groups



Fig. 24. Sampling on the river Tamis in Pancevo

Wednesday, June 22, 2016

### **ACTIVITIES PLANNED**

- Visit to Pancevo industrial zone and meeting with representatives of Petrochemical company (Pancevo) and factory tour was planned.
- Visit to nature park in Pancevo (Ponjavica).

### **ACTIVITIES REALIZED**

- From 10:00-13:00h, visit to Pancevo industrial zone and meeting with representatives of Petrochemical company (Pancevo) was realized. On that meeting, representatives of industrial zone had presented their activities and discussion about environmental problems prevailed. Besides experts from Japan, Dr. Srdjan MILETIC from IChTM, Katarina BANJAI, Olga SIPOVAC, Vesna BOROVNICA, and Iliana TERPENKA from Pancevo city, Sasa BORZANOVIC, Iboja RASA, Marija DZIVDZANOVSKI, Dragana MALOVIC, Dusan VELIKINAC and Dragoslav VUKOVIC from industrial zone took participation.

<http://www.hip-petrohemija.com/home.8.html>

- From 14:00-17:00h, visit to nature park in Pancevo (Ponjavica) to estimate situation of environmental preservation, to evaluate (good/no) and give advice was realized. It was recognized that same in Great War Island, many parasitic plants are present and that special attention should be given to these species. Zenja MARINKOVIC and Miodrag MILCIC from JKP ZELENILLO and members from “Naša **Ponjavica**” joined our event.



Fig. 25. Visit to Petrochemical company in Pancevo



Fig. 26. Visit to Fertilizer company in Pancevo



Fig. 27. Visit to nature park Ponjavica in Pancevo



Fig. 28. Discussion about nature park Ponjavica in Pancevo

Thursday, June 23, 2016

### **ACTIVITIES PLANNED**

- Visit to JICA Balkan and video conference with representative from JICA Kansai.
- Departure of experts from Japan from Serbia.

### **ACTIVITIES REALIZED**

- From 10:00-12:00 video conference with JICA Kansai was Visit to JICA Balkan and video conference with representative from JICA Kansai. In JICA Balkan office were present Dr. Takeshi NAKANO, Dr. Ryosuke YOSHIKI, Dr. Atsuro HINO, Ms. Emina TAKAHASHI (translator), Mr. Ryohei ANZAI, Dr. Vladimir BESKOSKI, Mr. Vladimir DELJA, Ms. Olga SIPOVAC. In JICA Kansai, Ms. Akiko NISHIHARA, Ms. Ikuko MOROI and Dr. Toshiki FUJII were present. On the meeting, Prof. NAKANO presented all activities realized during this visit to Serbia. Special attention were given to Project Design Matrix, Overall Goal, Outputs, and Activities of the Project. All sides expressed good will to continue this cooperation between Japan and Serbia.



Fig. 29. JICA Balkan & JICA Kansai video conference



Fig. 30. JICA Kansai



Fig. 31. JICA Balkan



Fig. 32. JICA Balkan

- As planned, Prof. dr. Takeshi NAKANO, Dr. Ryosuke YOSHIKI and Dr. Atsuro HINO had left Serbia with the flight number TK 1084 (20:20h) from the airport "Nikola Tesla" in Belgrade.

Belgrade, June 30, 2016