



Međunarodna konferencija
**UPRAVLJANJE OPASNIM I NEOPASNIM
OTPADOM U REGIJI**

International Conference
**HAZARDOUS AND UNHAZARDOUS
WASTE MANAGEMENT IN THE REGION**

Zenica, 11. 2. - 13. 2. 2010.







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dr. sc. Nevenko Herceg

ministar okoliša i turizma u Vladi
Federacije BiH i predsjednik
Organizacijskog odbora konferencije

Kao posljedica
sustavne,
dugogodišnje
nebrige i minimalnih
ulaganja u upravljanje
otpadom, otpad je danas
jedan od većih, ako ne i

najveći okolišni problem Bosne i Hercegovine. Više je nego jasno kako od toga koliko ćemo učinkovito i brzo riješiti sadašnje probleme upravljanja otpadom, ovisi ne samo kakvoća življenja naših građana već jednako tako i privlačnost zemlje kao turističke destinacije te zadržavanje njezine međunarodne percepcije kao zemlje očuvanog okoliša i proizvodnje zdrave hrane, ali i započeti proces stabilizacije i približavanja Europskoj uniji. Naravno, uz nužno poznavanje elementarnih činjenica, za rješavanje problema otpada potrebno je puno dobre volje i spremnosti da se donese ne samo politička nego prije svega javna odluka. Jer, neki problemi u okolišu, a otpad je jedan od većih, duboko su ukorijenjeni u društvu i ne mogu ih riješiti sami političari niti stručnjaci, čak niti institucije civilnog društva. Oni zahtijevaju javni dogovor i suradnju svih te uspostavljanje vertikalne povezanosti od države do pojedinca. Iako je dosadašnji ključni problem glede otpada u BiH bilo izostajanje stručnog i sustavnog pristupa problemu te izostajanje određene klime javnosti i formiranje kritične mase u odlučivanju, posljednjih nekoliko godina napravljeni su veliki naponi za dostizanje standarda EU u oblasti integralnog sustava upravljanja otpadom. Budući da država BiH nema eksplicitnu nadležnost u ovoj oblasti, upravljanje otpadom definirano je entitetskim zakonima kojima se na nov način, sukladno Direktivama EU, tretira problem otpada. Kao rezultat političke spremnosti i odgovornosti, u sklopu seta okolišnih zakona, na razini Federacije BiH 2003. godine donesen je Zakon o upravljanju otpadom koji rezimira ključna načela i smjernice proistekle iz EU direktiva i predstavlja značajan korak u približavanju europskoj legislativi u oblasti otpada. Donesen je i niz pravilnika, čija primjena zajedno

sa Zakonom stvara dobre pretpostavke za kvalitetno upravljanje otpadom. Zakonom su postavljena načela suvremenog pristupa upravljanju otpadom, uključujući i načelo regionalnosti na kojem počiva i usvojena Strategija upravljanja otpadom koja predviđa izgradnju regionalnih centara za upravljanje čvrstim otpadom. Ova strateška odluka podržana je od strane Svjetske banke kroz Projekt upravljanja čvrstim otpadom u BiH u sklopu kojeg su uspostavljeni regionalni centri u Sarajevu, Zenici, Bijeljini, Mostaru i Banja Luci. Međutim, postoje realne potrebe za daljnjim unaprjeđenjem cjelokupnog sustava koji se treba zasnivati na načelima prevencije i smanjenja količine otpada, reciklaže, odgovornosti za pokrivanje troškova zbrinjavanja otpada te otklanjanja štetnog djelovanja otpada na ljudsko zdravlje te izgrađeni i prirodni okoliš. Za pokretanje promjena i usmjeravanje prema održivom upravljanju otpadom, ali i za razmjenu iskustava te daljnje usvajanje europskih propisa o otpadu u domaći pravni sustav, od iznimne je važnosti otvaranje dijaloga o trenutnoj situaciji u upravljanju otpadom kako sa stajališta države BiH i njezinih entiteta, tako i sa stajališta pojedinih zemalja u regiji. Otvaranje dijaloga temeljna je ideja i koncept i Međunarodne konferencije "Upravljanje opasnim i neopasnim otpadom u regiji" kojoj je cilj na jednom mjestu okupiti predstavnike regulatornih institucija iz regije, predstavnike lokalnih zajednica, gospodarstvenika i institucija civilnog društva kako bi kroz razmjenu različitih mišljenja i iskustava pronašli najbolje odgovore na postojeću dilemu oko izbora najkvalitetnijeg sustava upravljanja otpadom. Upravljanje otpadom jeste okolišno pitanje, ali i gospodarska aktivnost, a odabir pogrešnog koncepta svakako bi imao ozbiljne posljedice koje je naknadno teško mijenjati. A pravo na pogrešku nemamo.



Ph.D. Nevenko Herceg

Minister of Environment and Tourism Government
of Federation of BiH and President
of the Conference Organizing Committee

As a consequence of systematic, lack of care on long scale and minimum investments in the waste management, waste is nowadays one of the bigger, if not the biggest environmental problem of Bosnia and Herzegovina. It is more than clear that on the fact how efficient and fast we are to resolve the current waste management problems, depends both the quality of living of our citizens and equally so the attraction of our country as a tourist destination and maintaining of its international perception as a country of preserved environment and production of healthy food, but also to begin the process of stabilization and accession to approaching the European Union. However, bearing in mind the necessary grasp of fundamental facts, for resolving the issue of waste it is necessary that one has a lot of good will and readiness to pass not only political but primarily a public decision. Bearing in mind that some problems in the environment, and the waste is one of the biggest, are deeply rooted in the society and cannot be resolved by politicians and experts only, and not even by the institutions of civil society. They require public response and cooperation of all and setting up the vertical connection from state to the individual. Although the key problem to date regarding the waste in BiH was a lack of professional and systematic approach to the problem and the lack of certain climate of public and forming the critical mass in decision-making, in the recent years huge efforts were made for achieving the EU standards in the area of integral waste management system. Since the state of BiH does not have explicit authority in this field, waste management is defined by the entity laws which in a new way, in the line with the EU Directives handle the waste problem. As a result of political readiness and responsibility, in the set of environmental laws, the Law on waste management was passed at the level of Federation of BiH in the year 2003 which summarizes key principles and directions that arose from the EU directives and it presents a significant step in getting closer to the European legislation in the area of waste. A number of rule books were passed,

which application together with the Law creates good preconditions for quality waste management. The Law sets forth the principles of the modern approach to waste management, including the regional principle at which the adopted Strategy of the waste management rests which foresees the building of regional land fields for solid waste management. This strategic decision is supported by the World bank through the Solid waste management in BiH which includes setting up regional land fields in Sarajevo, Zenica, Bijeljina, Mostar and Banja Luka. Nonetheless, there are realistic needs for further upgrade of the entire system which should be based on the principles of prevention and decrease of quantity of waste, recycling, responsibility for covering the costs and waste management and removing harmful waste effect to human health and built and natural environment. As for the initiation the changes and direction to sustainable waste management, but also for the exchange of experiences and further adoption of European regulations on the waste in the domestic legal system, the opening of a dialogue on the current situation in the waste management both from the point of view of the state and its entities and from the point of view of certain countries in the region is of extreme importance. Opening of a dialogue is a basic idea and concept of International conference "Hazardous and un-hazardous waste management in the region" aimed at gathering at one place representatives of the regulatory institutions from the region, representatives of local communities, businessmen, and institutions of civil society in order to find the best answers to the existing dilemma regarding the choice of the best waste management system through the exchange of various views and experience. Waste management is an environmental issue, but also the economic activity and the choice of wrong concept would by all means have serious consequences which cannot be subsequently easily changed. And we do not have right to make mistake.



Borjana Krišto

predsjednica Federacije
Bosne i Hercegovine

Uduhu Konferencije koja je svojom temeljnom idejom i konceptom okupila na jednom mjestu predstavnike relevantnih institucija, gospodarskih čimbenika iz

Bosne i Hercegovine i iz regije, kao i uvažene i eminentne znanstvenike, stručnjake i sveučilišne profesore a s ciljem razmjene iskustava i iznalaženja kvalitetnih i najboljih rješenja za održivo upravljanje otpadom, dopustite mi da vas srdačno i toplo pozdravim. Smisao, suština i zadatak zaštite zdravlja ljudi, zdrave sredine, okoliša i prirodnih resursa se sastoji u tomu da se spriječe ili svedu na najmanju moguću mjeru rizici koji narušavaju i ugrožavaju naše zdravlje i imaju štetne posljedice i utjecaje na ekološki sustav. Svijest svakog civiliziranog društva mora i treba se razvijati u tom pravcu. Svi moramo biti svjesni opasnosti do kojih može doći i do kojih dolazi poradi neodgovornog i nesustavnog postupanja sa otpadom i njegovim upravljanjem, kao jednim od najvećih okolišnih problema kako u BiH tako i u regiji. Upravljanje opasnim, ali i neopasnim otpadom je sigurno složen proces koji zahtijeva interdisciplinarni pristup i timski rad stručnih ljudi različitih profila kao i puno angažiranje relevantnih institucija i nositelja vlasti u svakoj zemlji. Razvoj i programi sa mjerama implementiranja odgovarajućeg zakonodavstva i adekvatna suvremena tehnologija su značajne komponente uspostavljanja praktičnog i ekološki održivog sustava upravljanja opasnim otpadom i, što je vrijedno istaći, garant su razvitku i jačanju svijesti o zajedničkoj odgovornosti za ovaj problem u Bosni i Hercegovini i šire. Svakako će iskustva, stručnost i primjena u praksi razvijenih zemalja, te usvajanje europskih propisa o otpadu omogućiti nam, ne samo, nova saznanja, već će biti i pokazatelj kako pravovremeno i efikasno rješavati ovo značajno pitanje. Odgovarajuće smjernice, odgovore i rješenja u tom pravcu, sigurno će, kroz stručna prezentiranja,

diskusije i razmjenu stajališta, dati i ova Konferencija. Od učinkovitih, brzih i kvalitetnih rješenja sadašnjih problema upravljanja otpadom će ovisiti, ne samo zaštita, obnova i poboljšanje ekološkog kvaliteta našeg življenja i našeg zdravlja, već i prepoznatljivost Bosne i Hercegovine kao interesantnog i atraktivnog turističkog odredišta sa izuzetnih prirodnim potencijalima, bogatstvima i zdravim okolišem. Na koncu, posebne pozdrave i iskrene čestitke upućujem organizatorima, pokroviteljima i svima drugima koji su na različite načine doprinijeli uspješnoj pripremi, organiziranju i održavanju ove regionalne Konferencije i uz želje za konstruktivan i kvalitetan rad, želim vam svako dobro te puno uspjeha u svim budućim aktivnostima i projektima.

Borjana Krišto,

President of the Federation
of Bosnia and Herzegovina

In the spirit of the Conference which, based on its ideas and concepts, has gathered in one place all representatives of relevant institutions, economic operators from entire Bosnia and Herzegovina and the region, and distinguished and eminent scientists, experts and university professors, and given them the opportunity to exchange their experiences and search for the best solutions for sustainable waste management, allow me to welcome you cordially

The significance, nature and the task of protecting human health, healthy environment, and natural resources is based on prevention or reduction to the minimum of possible risks which impair and threaten our health and have harmful consequences to the ecological system. Awareness of every civilized society must and should develop in that direction. All of us should be aware of the danger we can face and we are facing due to irresponsible and unorganized waste treatment and management, as one of the largest environmental problems in B&H and the region. Management of hazardous and non-hazardous waste is surely a complex process requiring interdisciplinary approach and team work of experts of various profiles, and full engagement of relevant institutions and authorities in every country.

Development and programs with measures for implementing appropriate legislation and adequate modern technology are significant components of establishing a practical and ecologically sustainable hazardous waste management, and what is important to mention, they are a guarantee for raising and strengthening the awareness of joint responsibility for this problem in Bosnia and Herzegovina and other countries. Experiences, expertise, and application of practices of developed countries, as well as the adoption of European regulations on waste, will surely enable us not only to acquire new knowledge but also to learn how to timely and efficiently solve this important problem. Appropriate guidelines, answers, and solutions will definitely, through experts' presentations, discussions and

exchange of opinions, be provided by this Conference. Efficient, fast and quality solutions of existing waste management problems will affect not only the protection, reconstruction and improvement of ecological quality of our lives and our health, but also the recognisability of Bosnia and Herzegovina as an interesting and attractive tourist destination with exceptional natural potentials, wealth and healthy environment.

Finally, I would like to thank and congratulate organizers, sponsors and others who, in different ways, contributed to the successful preparation and organization of this regional Conference, wishing them to have a constructive and good quality work, and a lot of success in future activities and projects.





Mustafa Mujezinović

premijer Federacije BiH

Dozvolite mi da u ime Vlade Federacije BiH pozdravim predstavnike Svjetske banke u BiH, Delegacije Evropske Komisije u BiH, Federalnog ministarstva

okoliša i turizma, kao i sve učesnike Konferencije, kako predstavnike institucija i privrednih subjekata iz Bosne i Hercegovine tako i iz regiona. Upravljanje otpadom u Bosni i Hercegovini prioritetno je pitanje zaštite okoliša, te jedno od najzahtjevnijih područja u smislu usklađivanja sa standardima Europske Unije i za razliku od zemalja članica Europske Unije, gdje je otpad strateški resurs od kojeg se dobivaju određene količine energije, Bosna i Hercegovina je suočena s kompleksnim i višestrukim problemima u upravljanju otpadom koji ozbiljno ugrožavaju okoliš, a samim tim i utiču i na sam kvalitet življenja naših građana. Bosna i Hercegovina posjeduje raznolik i očuvan prirodni i kulturni turistički potencijal koji se mora i zaštititi, ali također mora imati savremeniji i ambiciozniji odnos prema ovoj oblasti. Rezultate lošeg upravljanja ili neupravljanja otpadom možemo vidjeti na svakom koraku i svuda oko nas, stoga moramo utjecati i na svijest javnosti o ovom problemu, jer se po pitanju otpada, siguran sam, utičući na javnost, može učiniti mnogo više. Želim naglasiti da Vlada Federacije Bosne i Hercegovine, odnosno Federalno ministarstvo okoliša i turizma intenzivno radi u pravcu stvaranja novih zakonskih mogućnosti, koje će biti podloga za nove organizacijske okvire, a time i za dizanje na viši nivo zaštite okoliša. Međutim, još uvijek postoji značajan broj pitanja na kojima organi vlasti moraju raditi u cilju dogradnje sistema, na način da se otklone prepreke ka stvaranju povoljnijih uvjeta za održivo upravljanje otpadom. Vlada Federacije Bosne i Hercegovine daje snažnu podršku svim projektima, novim tehnološkim i tehničkim rješenjima u upravljanju otpadom, a sve u cilju pravovremenog sprječavanja zagađivanja i smanjenja posljedica po zdravlje ljudi i okoliš. Također želim istaći da u Bosni i

Hercegovini postoje i vlastita iskustva kad je u pitanju savremeno upravljanje otpadom. U vrijeme kad sam obavljao funkciju premijera Kantona Sarajevo pokrenut je projekat sanacije sarajevske deponije u Smiljevićima, gdje se već deset godina iz otpadnih gasova koristi snaga od 500 KW za proizvodnju električne energije. Uvjeren sam da će ova konferencija kroz međunarodnu saradnju, te razmjenu različitih iskustava, ali i promoviranje novih tehnologija upravljanja otpadom, pomoći u rješavanju postojećih dilema oko različitih sistema upravljanja otpadom, te da će nam iskustva razvijenih zemalja pomoći da pronađemo najbolja rješenja za primjenu u našoj praksi.



Mustafa Mujezinović

Prime Minister of the Government of F BiH

First, I would like to welcome, on behalf of the Government of the Federation of Bosnia and Herzegovina, the representatives of the World Bank in Bosnia and Herzegovina, the representatives of the Delegation of the European Commission to Bosnia and Herzegovina, the representatives of the Federal Ministry of Environment and Tourism, as well as all the Conference participants representing the institutions and corporate entities both from Bosnia and Herzegovina and from the region. Waste management in Bosnia and Herzegovina is an issue predominantly related to the environment protection and one amongst the most demanding areas in terms of its harmonization with the standards applicable in the European Union where the waste is a strategic resource generating certain quantities of energy. Bosnia and Herzegovina is facing complex and multiple challenges in waste management seriously harming the environment, and thereby implicitly affecting the life quality of our citizens. In view of the fact that Bosnia and Herzegovina has a diversified and preserved natural and cultural potential for tourism that has to be further preserved and safeguarded, it must take one more contemporary and ambitious attitude toward this issue. Results of poor waste management or non-management may be seen everywhere and anywhere around us and therefore we have to rise the public awareness in this regard, since for the waste disposal issue, I am sure of that, much more can be achieved by rising the public awareness. I would like to point out that the Government of the Federation of Bosnia and Herzegovina, i.e. the Federal Ministry of Environment and Tourism is making strong efforts toward creation of new legislative solutions indispensable as the background for new organizational framework, and therewith, for upgrading the level of the environment protection. However, there are still a large number of the issues to be addressed by the authorities in order to upgrade the system, in a manner that would eliminate the barriers toward creation of the more favorable conditions for a sustainable waste management. The Government of the Federation

of Bosnia and Herzegovina strongly supports all the projects and new technological and technical solutions for waste management, and all this aiming at timely pollution prevention and mitigation of the pollution's effects to the human health and environment. I would also like to reiterate that Bosnia and Herzegovina has its own experience as well in regard of modern waste management. Back at the time when I used to hold the office of the Prime Minister of the Sarajevo Canton, a project had been started aimed at improvement of the conditions at the Sarajevo Waste Disposal Site in Smiljevići, where over last ten years a 500 KW capacity from waste gases is being used to generate the electricity. I am confident that, through an international cooperation and by sharing the different experiences and as well by promoting new waste management technologies, this Conference will help us find the solutions to current dilemmas regarding different waste management systems and that the experience of the developed countries will also help us identify the best solutions to be applied in our practice.



Husein Smajlović

načelnik Općine Zenica

Uz iskrenu dobrodošlicu učesnicima Konferencije o upravljanju opasnim i neopasnim otpadom u regiji, izražavam nadu da će cijenjeni skup

u ovih par dana iznaći nove modalitete saradnje u rješavanju problema koji je odavno problem svijeta, a ne samo lokalne zajednice, zemlje, ili regije. Građani i gradska uprava Zenice već nekoliko godina su aktivno uključeni u rješavanje određenih segmenata problema otpada. Danas, kao rezultat te upornosti imamo savremenu Regionalnu deponiju koja radi u skladu sa najmodernijim evropskim standardima. Za takav rezultat nisu potrebni samo novci, nego prije svega otvoreni dijalog sa svim faktorima u lokalnoj zajednici, počev od svakog pojedinog građanina do institucija društva i susjednih općina u regiji kako bi se otklonile sumnje i riješile nedoumice koje uvijek prate ovakvu vrstu projekata. Transparentnost i iskrenost, a prvenstveno svijest o problemu čine osnovicu na kojoj se grade najbolja rješenja za budućnost. Problem upravljanja opasnim i neopasnim otpadom u regiji također mora početi od premisa otvorenosti i transparentnosti. Ako priznamo da naše ponašanje može biti štetno ne samo po nas nego i po druge ljude gdje god da se oni nalazili, već smo učinili prvi i odlučujući korak. Mislimo da Zenica i ovdje može ponuditi određene pouke, jer smo u nekoliko navrata upravo insistirajući na otvorenosti alarmirali javnost i privredne subjekte u kojima se pojavio opasni otpad i energično izdejsvovali rješavanje problema. Umjesto stavljanja problema pod tepih, izabrali smo učinkovito i efikasno djelovanje. Ponekad se čini da ključ rješenja pitanja otpada u rukama drže veliki sistemi. To je samo djelimično tačno. Pravo i obaveza svih građana je da zahtijevaju zdrav okoliš, a obaveza institucija je da institucionalnim, upornim i

dugoročnim nastojanjima prisile takve sisteme da se ponašaju unutar dozvoljenih granica. Ad hoc rješenja ne mogu dovesti do željenog učinka. S druge strane, svaki čovjek ponaosob mora prihvatiti svoj dio odgovornosti i nastojati ga riješiti na samom izvoru. Ponašanje u našem vlastitom dvorištu, odgovorna upotreba automobila, korištenje ekološki prihvatljivog ogrijeva te prirodnih vidova energije koje često i ne primjećujemo mada nude jeftina i dugoročno korisna rješenja, sve su to načini da se prevaziđe trenutna nepovoljna situacija. Mi pripadamo generaciji tehnološkog napretka. Nažalost, sa porastom tehnološkog napretka, raste i količina proizvedenog otpada. Način upravljanja otpadom oslikava i stanje svijesti jedne zajednice. Zato je više nego ikada potrebno razgovarati i iznaći zajednička rješenja. U eri posvemašnje globalizacije čovjek koji se rekreira u zeničkoj Areni neraskidivo je povezan sa onim što mirno šeta obalom Skadarskog jezera ili uživa u jutranjoj kahvi kod Tromostovlja. Zdrav životni okoliš je tema oko koje će se ta trojica ljudi zasigurno i bezuslovno složiti. Počesto je uputno vratiti se mudrostima koje predstavljaju ekstrakt najživotnijeg narodnog iskustva. U Bosni ima izreka: „Baci niz vodu, naći ćeš uz vodu“. Neka odgovorno ponašanje počne od svakoga od nas. Učinimo naš i život naših komšija boljim i ugodnijim. Neće proći puno, pa će isto to oni učiniti za nas.



Husein Smajlović

Mayor of Zenica

Extending my sincere welcome to the participants of the Conference, let me express my hopes this gathering would manage to find new models of cooperation in tackling the issue that has long become the problem of the world going far beyond the boundaries of a local community, a country or a region. In recent years, the citizens and the local authorities of Zenica has been actively involved in addressing some aspects of the issue of waste. Nowadays, as a result of such persistence, we have a Regional Landfill operating according to the up-to-date EU standards. It is not just money that one needs to achieve such a result; it is first and foremost an open dialogue with all stakeholders in the local community starting from every single citizens to the institutions of the society and neighboring municipalities in order to remove doubts and resolve dilemmas that inevitably go with these kind of projects. Transparency and sincerity, and particularly the awareness of the problem make up the base the best solutions for the future are built upon. The management of hazardous and non-hazardous waste in the region shall also start from the premises of openness and transparency. If we admit the fact that our behavior may be detrimental not only to ourselves but to other people wherever they live, we have already made a decisive step forward. We believe Zenica could offer some good example here as well, because we managed on several occasions, by alarming the public and the companies in whose compounds the hazardous waste was detected, to work for the solution of the problem. Instead of sweeping the problem under the carpet, we opted for more effective and efficient solution. People sometimes think the key to the problem of waste is in the hands of large systems. It is true only to a certain extent. It is the right and obligation of all citizens to demand a safe environment, but it's on the institutions to make this struggle a systematic effort, and to force those system to act responsibly as a result of persistent and long-term actions. Ad hoc solutions

could not lead to the desired outcome. On the other hand, each individual has to accept his/her part of the responsibility and try to resolve it at the very source. The things we do in our own backyard, the responsible car use, utilizing environment friendly fuels and renewable energy which often go unnoticed although they offer cheap and sustainable solutions, all of it make up the proper solutions for resolving the current grim situation. We belong to the generation of technological progress. Unfortunately, the greater the technological progress, the greater the amount of waste. The way we manage the waste reflects the level of progress in a community. That's why now, more than ever, we need to talk and find common solutions. In this age of all-encompassing globalization, a man playing basketball in Zenica's City Arena is intrinsically connected to the one taking a walk along the coast of Skadar Lake or the one enjoying his coffee by the Tromostovlje. Safe environment is certainly the topic about which these three men would certainly reach a consensus. It is often advisable to draw from the treasury of the people's wisdom that comes as a result of the real-life experience. There is a saying in Bosnia: „Whatever you throw downstream you'll find upstream“. May the responsible behavior start from each of us. Let us make our life and that of our neighbors better and more pleasant. It won't be long and they will do the same for us.



Marco Mantovanelli

direktor Ureda Svjetske banke u BiH

Upravljanje čvrstim otpadom je ključni sektor u razvojnom programu Svjetske banke. Sakupljanje i odlaganje čvrstog otpada je primarna potreba za

zdravlje i dobrostanje ljudi i zahtijeva institucionalno, finansijski i okolišno održive strukture kako bi adekvatno i funkcioniralo. Pravilno funkcioniranje sistema sakupljanja i odlaganja otpada direktno unaprjeđuje živote ugroženih ljudi. S tim u vezi, posebna pažnja je potrebna ljudima koji zarađuju za život od sakupljanja otpada i izdvajanja korisnih sastojaka iz otpada s obzirom da je ova kategorija nedavno teško pogođena padom cijena mnogih reciklažnih materijala. Svjetska banka širom svijeta podržava širok spektar aktivnosti iz oblasti upravljanja čvrstim otpadom kroz tehničku pomoć i financiranje. To obuhvata institucionalno uređenje; pravne okvire i reformu politike; uključenje privatnog sektora; mehanizme za povrat troškova; međuopćinske dogovore; sakupljanje i recikliranje otpada; infrastrukturu za prijevoz otpada; deponije; kompostiranje; zatvaranje divljih deponija; unaprjeđenje životnog standarda sakupljača otpada i uvođenje ekonomskih instrumenata. Tipični instrumenti su zajmovi za specifične investicije (SIL) i finansiranje smanjenja emisije ugljika (CF) za razvoj infrastrukture, tehnička pomoć (TA) za jačanje kapaciteta i institucionalni razvoj te takozvani zajmovi za razvojnu politiku (DPL) za reformu državnog sektora. Za određene kategorije opasnog otpada, financiranje je osigurano kroz Globalni fond za zaštitu okoliša (GEF). U Europi jasno vidimo kako Europska unija određuje program upravljanja čvrstim otpadom. To je očito kod zemalja članica gdje važeći set EU direktiva čini pravnu osnovu ili kod zemalja u različitim fazama pristupa Europskoj uniji kojima je isti set direktiva bitan cilj za ispunjenje. Dostupni kohezijski i strukturalni fondovi koji pomažu prelazak na zadate standarde igraju važnu ulogu u stopi investicija u sektor upravljanja otpadom u spomenutim zemljama. Također

mnoge zemlje koje su politički mnogo različitije od Europske unije i često mnogo udaljenije ili čak i bez ikakve perspektive za pristup Europskoj uniji koriste EU kao referentnu točku za standarde u upravljanju čvrstim otpadom. Pravna stečevina EU za zaštitu okoliša (EU Environmental Acquis) i instrumenti finansijske podrške od velike su pomoći ali ne čine život jednostavnim. U predpristupnim zemljama te novim zemljama članicama, većina pažnje je usmjerena na investiranje u sanitarne deponije što ima za rezultat zaostajanje u razvoju drugih oblasti. Tipične razvojne potrebe koje ostaju na duži period su unaprjeđenje lokalnih kapaciteta za upravljanje višim nivoima usluga koje imaju više operativne troškove pa otud i potreba (i politička volja) za povećanje naplate troškova upravljanja otpadom. Često se smatra da kroz dostupnost finansijskih sredstava za nove deponije i manjak pažnje na operativne posljedice obim spomenutih odlagališta postaje premalen što također ima negativan utjecaj na operativne troškove. Od ključne je važnosti da općine udruže snage i da krenu pristupom regionalnog odlaganja otpada koji je i dovoljno velik da postane ekonomski održiv. Drugi veoma dominantan vid pravne stečevine Europske unije je potreba za drastičnim smanjenjem otpada koji se odlaze na deponije. Mnoge nove zemlje članice skoro da nisu počele sagledavati ovaj problem dok se i stare zemlje članice još uvijek bore sa ovim zahtjevom koji bi trebao imati za rezultat da do 2020. dođe do smanjenja biorazgradivog otpada za 65%. Ovo kao i ostali zahtjevi povećali su ukupne troškove sakupljanja i odlaganja otpada na 100 eura po toni. Ovo su izazovi koji zahtijevaju da se svaka dimenzija solidnog upravljanja čvrstim otpadom pravilno formira: dugoročno planiranje, jaka veza između državne razvojne politike i lokalnih nadležnosti te kapaciteta za upravljanje sistemima otpada i određivanje i prikupljanje odgovarajućih naknada te zreo privatni sektor za stvaranje efikasnijih sistemskih operacija. Stoga, integracija spomenutih suštinskih elemenata upravljanja čvrstim otpadom je u našim kreditnim aktivnostima sada važnija nego što je to bilo slučaj do sada.

Marco Mantovanelli

Director of the Office of the World Bank in BiH

Solid Waste Management (SWM) is a key sector in the World Bank's development agenda. Collection and disposal of solid waste is a primary necessity for public health and wellbeing that requires institutionally, financially and environmentally sustainable structures to function adequately. Properly functioning waste collection and disposal directly improves lives of vulnerable people. In this respect, special attention is required for people that make a living out of waste collection or the extraction of useful materials from waste, and how they have recently been hit hard by the drop in prices of many recyclables. Worldwide, the Bank supports a broad range of activities on the domain of solid waste management with technical assistance and funding, such as institutional arrangements; legal frameworks and policy reform; private sector involvement; cost recovery mechanisms; inter-municipal agreements; collection and recycling; waste transfer infrastructure; landfills; composting; dump closure; waste picker livelihood upgrading; and the introduction of economic instruments. Typical instruments are *specific investment lending (SIL)* and *carbon finance (CF)* for infrastructure development, *technical assistance (TA)* for capacity building and institutional development and so-called *development policy lending (DPL)* for national sector reform. For certain hazardous categories of waste also funding through the Global Environmental Fund (GEF) is available. In Europe, we clearly see how the European Union is setting the agenda for SWM. This is obvious for member states where the relevant set of EU Directives forms its legal basis or countries in various stages of EU accession where the same set of Directives are important targets for compliance. The available cohesion and structural funds to support conversion play an important role in the level of investments in the waste sector of these countries. In addition, we also see countries further out --and often much further away from, or even without much perspective of accession-- look at the EU as the benchmark for SWM standards. The EU Environmental Acquis and financial supporting tools are of great help

but do not make life simple. Most attention in pre-accession countries and new member states is geared towards investments in sanitary waste disposal but often other developments lag behind. Typical development needs that remain for much longer periods are the upgrading of local capacities to manage higher service levels of operations with increased operational costs and thus the requirement (and political will) to increase collection of waste charges. One regularly sees that through the availability of funding for new landfills and lack of attention for operational consequences, the scale of these disposal sites is too small which negatively affects operating costs as well. It is key for municipalities to join forces and step into regional waste disposal schemes that are big enough to become economically viable. Another dominant aspect of the EU Acquis is the need for drastic reduction of waste to landfills. Many new member states have hardly started to look at this and even old-time member states are struggling with this requirement that will result in 65% reduction of biodegradable waste in 2020. This and other requirements have driven up overall collection and disposal cost to the range of Euro 100 per ton.

These are challenges that require every dimension of sound SWM to take its proper shape: long-term planning; a strong connect between national policy development and local responsibilities and capacities to manage waste systems and set and collect adequate tariffs; and a mature private sector to make system operations more effective. Therefore, integration of these vital elements in SWM is now even more important in our lending operations than ever.





Dr. Johann Hesse

prvi tajnik Delegacije Europske komisije u BiH i voditelj sektora za gospodarski razvitak, trgovinu i prirodne resurse

Acquis communautaire je pravna stečevina Evropske unije (EU), a poglavlje acqvis vezano za okoliš sadrži preko 200 važnijih pravnih akata,

uključujući i akte koji reguliraju upravljanje otpadom. Zemlje kandidati i potencijalni kandidati za članstvo u Evropskoj uniji moraju prenijeti i provesti acqvis kroz domaću legislativu i politiku. Iako je pravo okoliša EU jedinstveno, postoji mnoštvo tumačenja i širok spektar institucionalnih politika za njegovo provođenje. Ovaj proces je također kompleksan zato što zemlje, uključujući i BiH, moraju usvojiti seriju novih politika u relativno kratkom vremenu. Često je teško izabrati pojedinačno pitanje iz obimne liste prioriteta za Evropske integracije. Što možemo uraditi da pitanja okoliša dobiju veći prioritet u BiH? Europska unija i BiH su potpisale Sporazum o stabilizaciji i pridruživanju (SSP) u junu 2008. godine. Sporazum će stupiti na snagu kada ga ratificiraju zemlje članice. Ovaj sporazum je ugovorni odnos između BiH i EU i podrazumijeva postepenu provedbu slobodne trgovine. Sporazumom se zahtjeva od BiH da usvoji Evropske standarde. Između ostalog, ovo znači da BiH ima pravnu obavezu da prenese i provede pravo okoliša EU. Činjenica je da je upravljanje čvrstim otpadom često spominjano kao najteže pitanje u kontekstu Evropskih integracija. Ukupno generiranje otpada je u porastu u čitavom regionu zapadnog Balkana, iz razloga što su privredne aktivnosti i potrošnja jače od trenutnih inicijativa za preventivu generiranja otpada. Kako usporiti generiranje i odlaganje otpada? BiH je na pravom putu zato što se trenutno implementiraju projekti izgradnje sanitarnih deponija koje će omogućiti pravilno odlaganje otpadom. Međutim, slijedeći korak koji se očekuje od zemlje je daljnji naponi da se poštuje hijerarhija upravljanja otpadom koju propisuje EU. Da podsjetim, hijerarhija upravljanja otpadom je osnovni

princip prava okoliša EU koji propisuje načine upravljanja otpadom redoslijedom rastućeg prioriteta: konačno odlaganje (napr. deponije), obnova energije (npr. spaljivanje), povrat materijala (npr. reciklaža), ponovno korištenje i minimizacija. Praktično ovo znači da se trebaju pojačati investicije u upravljanje sa specifičnih vrstama otpada, počevši od infrastrukture za upravljanje opasnim otpadom do sistema upravljanja ambalažnim otpadom, otpadnim gumama i otpadnim motornim uljem. Izazov je pronalaženje održivog financiranja za ove investicije. Sigurni smo da će ova konferencija dati svoj doprinos dijalogu o potrebama u sektoru upravljanja otpadom. Napredak u ovom sektoru je izazovan proces, koji je Evropska unija spremna da podrži u predstojećem periodu



Ph.D. Johann Hesse

First Secretary of the EC Delegation in BiH, and Head of sector for economic development, trade and natural resources

The *acquis communautaire* is the entire body of European Union (EU) law; for the chapter of environment it comprises of over 200 major legal acts, including the management of waste. In order to join the EU, countries that are potential candidates and candidates have to transpose the *acquis* into domestic law and policy and implement its provisions. Although there is only one *acquis* for environment, there continues to be many different interpretations and a wide array of institutional policies to implement it. This process is complex also because the countries, including BiH, have to adapt a series of new policies within a relatively short period. It is therefore often difficult to single out an issue to be tackled out of a dense line-up of priorities for European integration. How do we move environmental issues higher up on BiH list of priorities? In June 2008, the EU and BiH signed the Stabilization and Association Agreement (SAA), which will enter into force once ratified by the EU Member States. The SAA is a contractual relationship which involves gradual implementation of free trade between the EU and BiH. The SAA also requires that BiH adopts EU standards. This means that BiH has a legal obligation to transpose and implement the *acquis* in the field of environment, among other fields. Incidentally, waste management has been often cited as the most difficult policy issue in the context of EU integration. Total waste generation is increasing across the entire Western Balkans region, as the economic activity and consumption are much stronger than different waste prevention initiatives. How do we curb waste generation and disposal? BiH is on the right track as we are now seeing strong efforts to implement the construction of sanitary landfills which will provide for safe disposal of waste. However, the next step that would be expected from the country is moving up the waste management hierarchy prescribed by the European Union. To remind, the waste hierarchy is the underlying principle of the waste management *acquis* and prescribes in the order of increasing priority the following steps in managing

waste: final disposal (e.g. landfills), energy recovery (e.g. incineration), material recovery (e.g. recycling), reuse and minimisation. In practice, this would mean increased investments to handle specific types of waste, anything from facilities for hazardous waste to facilities that will handle individual streams of waste such as packaging, tires and motor oil. The challenge is sustainable financing of these investments. We are confident that this conference will help contribute towards the dialogue on what is needed to expand the 'waste agenda' in Bosnia and Herzegovina, and move the country up the waste hierarchy. This is a challenging process, which the European Union will support in the coming period.



**N.J.E. Kirsten
Rosenvold Geelan**

veleposlanica Kraljevine Danske u BiH

Zadovoljstvo mi je da Vam se obratim povodom otvaranja ove veoma važne Konferencije, čiji ishod će biti konkretne smjernice i zaključci koji doprinose

novom poglavlju propisa o upravljanju otpadom u Bosni i Hercegovini i šire. Ponekad, kada govorimo o izazovima zaštite okoliša i borbi protiv klimatskih promjena, drugostepenim ciljevima i potrebi za zakonski obvezujućim instrumentima, nasuprot politički obvezujućim sporazumima – plašim se da mnogima ovo izgleda veoma akademski ili apstraktno. Ne dolaze svi iz zemlje poput moje, gdje je otoplavanje leda u dijelu zemlje (Grenland) očigledna realnost koja izaziva zabrinutost. Ono što je važno zapamtiti je što je stvarno, kada su rijeke u državi zagađene, kada je više od polovine kapaciteta centralnog grijanja protraćeno, kada je zrak u značajno mjeri zagađen, i kada nema sigurnih propisa vezanih za upravljanje otpadom. Mi čvrsto vjerujemo da ono što je postignuto sa COP15, usvojenim prije manje od dva mjeseca, nudi solidan okvir za neposredno reagiranje, te definira najvažnije korake u globalnim naporima u borbi protiv klimatskih promjena. Mi moramo Sporazum iz Kopenhagena iskoristiti kao osnovu za hitno pokretanje aktivnosti vezanih i za ublažavanje i za rješavanje važnog pitanja dostatnosti financija. U tom smislu, pozdravljam izjavu delegacije BiH u Kopenhagenu, da ovo nije samo problem zaštite okoliša, nego i ekonomski, društveni i politički izazov, koji je uz to i mogućnost za razvoj Bosne i Hercegovine. Aktivno sudjelovanje tolikog broja zemalja, uključujući BiH u Kopenhagenu prošle godine odražava političku odlučnost da se radi na ispunjavanju međunarodnih obaveza, s punim osvrtnom na globalne, regionalne i državne interese. Veliki broj zemalja je već odgovorio pozitivno na poziv, i čvrsto su se obavezali na ispunjenje Sporazum iz Kopenhagena, uključujući Bosnu i Hercegovinu.

Jednako bitno je i podizanje svijesti, poput delegacije BiH koja je iskoristila mogućnost da se upozna sa najnaprednijim sistemom upravljanja i obrade otpada – “The Amager Forbrænding and Project Symbiosen”. “Amager Forbrænding” predstavlja jedinstvenu tehnologiju pretvaranja otpada u energiju kojom se napaja 100.000 domaćinstava u Kopenhagenu. Project Symbiosen je mreža suradnje među industrijskim kompanijama, koja im omogućava razmjenu resursa (otpad do proizvodnje), što rezultira mogućnošću povećanja proizvodnje bez nepotrebnog povećanja upotrebe energije, vode i sirovina. Tokom posljednji 40 godina, Danska i danska tehnologija i znanja su izrasla u svjetske predvodnike u okolišnim tehnologijama obrade otpada. Ovo je bazirano na procesima istraživanja tehnologija koje nemaju negativan utjecaj na okoliš, i pokazuje da je moguće postići rast privrede (koja je bitna za BiH kao zemlju u razvoju) a u isto vrijeme voditi računa o zaštiti okoliša. U posljednjih deset godina se izvoz danske tehnologije tretmana otpada povećao tri puta, otvarajući na taj način mnoge druge sektore izvoza. Suočavanje sa izazovima vezanim za okoliš i istovremeno osiguravanje privrednog rasta su mogući – ali im je neophodno posvetiti pažnju i dugoročno se obvezati na njihovo ispunjenje. Stoga je ohrabrujuće saznanje da tretman otpada, kao jedno od najvažnijih okolišnih pitanja, dobiva na važnosti i pažnji u BiH. Stoga se najiskrenije nadam da će ova Konferencija doprinijeti daljem širenju svijesti o novim tehnologijama i sistemima tretmana, te da će Danska nastaviti partnerstvo kroz prijenos znanja i tehnologija.

H/E Kristen Rosenvold Geelan

Ambassador of Denmark in BiH

It is my great pleasure to address you at the opening of this very important conference, the outcome of which is to end up with concrete guidance and conclusions contributing to a new chapter for waste management regulations in Bosnia and Herzegovina and beyond. Sometimes when we talk about the environmental challenges and combating climate change, the 2 degree objective and the need for a legally binding instrument as opposed to a politically binding agreement – I fear that for most people this all seems very academic and abstract. Not everybody come from a country like mine where the melting of ice in part of the country (Greenland) is visible and a reality and concern. What is important to remember is what is real is when national rivers are polluted – when more than half of a community's district heating is wasted, when the air is seriously polluted and when no safe provisions are in place for waste management. We firmly believe that the achievements from COP15 adopted less than two months ago provide a strong framework for immediate action and defines important milestones in the global effort to fight climate change. We must use the Copenhagen Accord as the basis to launch immediate actions both in terms of mitigation and in relations to the important question of sufficient finances. In this respect I welcome the statement by the delegation of BiH in Copenhagen that this is not just a problem of environmental protection but an economic, social and political challenge in addition to being a development opportunity for Bosnia and Herzegovina.

The active participation of so many countries incl. BiH in Copenhagen last year reflects a clear political determination to work on fulfilment of the international obligations with full respect of global, regional and national interests. And already a great number of countries have responded positively to the call and committed firmly to the Copenhagen Accord incl. Bosnia and Herzegovina.

Equally important is to raise awareness as when the delegation from BiH used the possibility to see for themselves some of the most advanced waste management handling and treatment of Waste – the Amager Forbrænding and Project Symbiosen. Amager Forbrænding presents unique technology of converting waste into energy, supplying approximately 100.000 households in Copenhagen. Project Symbiosen creates network cooperation between industrial companies, enabling the companies involved to exchange resources (waste to production) resulting in the possibility to increase the production without necessarily increasing the use of energy, water and new raw materials. During the last 40 years Denmark and Danish technology and know-how has developed into one of world's leader in environmental, waste treatment technologies. This has been based on a process of investing in climate friendly technologies and shows that it is possible to achieve a growing economy (which is important for B&H as a developing country) and at the same time take care of the environment. Over the last 10 years Danish exports of waste treatment technologies alone have tripled and thus outperforming many other export sectors. Meeting the environmental challenges and securing economic growth can go hand in hand is possible – but this requires attention and a long term commitment. It is therefore encouraging to learn that the





N.E. Bosse Hedberg

veleposlanik Kraljevine Švedske u BiH,
osobni komentar

Svi znamo da je BiH je bogata velikim prirodnim bogatstvima, ali i da se njima nepravilno upravlja. Rijeke su jako zagađene kanalizacijom i

nekontroliranim odlaganjem otpada. Tisuće plastičnih boca plutaju rijekama i milioni plastičnih vrećica vise na obalnom grmlju. Ogromne količine metala se odbace svake godine, umjesto da se recikliraju. Zrak se zagađuje korištenjem nisko-energetskog uglja i dotrajalih vozila, od kojih mnoga navodno ne prođu tehnički pregled. Krčenje šuma je još uvijek problem i postoji potreba za znatnim povećanjem zaštićenih područja u cilju očuvanja biodiverziteta zemlje. Mi smo svjesni da je veliki dio infrastrukture u BiH uništen tokom rata. Osim toga, nedostatak ulaganja zbog nepovjerenja u pravno i poslovno okruženje, te u novije vrijeme globalna recesija, ostaju ozbiljne prepreke za razvoj. Povrh toga, trenutno stanje okoliša ugrožava ambicije zemlje za poticanje i profit od turizma, uključujući i eko-turizam. S ovakvom polaznom osnovom dobrodošli su naponi BiH koja je postepeno počela usvajati međunarodne konvencije i evropske standarde zaštite okoliša. Kako se država kreće ka statusu kandidata za EU, treba ubrzati institucionalne napore i praktične mjere na općinskom, entitetskom i državnom nivou. No, kapacitet za provedbu ekoloških standarda mora biti pojačan. Pravno provođenje politike zaštite okoliša i ekonomski poticaji bi uvelike mogli poboljšati situaciju. U okviru svoje razvojne pomoći, Švedska promovira zaštitu okoliša u drugim dijelovima svijeta. Ovo se također odnosi i na Bosnu i Hercegovinu. Nedavno je pokrenut Općinski Program upravljanja čvrstim otpadom. Ukupna vrijednost tog programa je oko 20 miliona KM i njegov glavni cilj je pomoći određenom broju općina u BiH da prikuplja, sortira, smanjuje i odlaze svoj otpad na ekonomičan i okolišno prihvatljiv način. Predloženo je da sektor okoliša postane treće područje

suradnje u sljedećoj Švedskoj strategiji za razvojnu suradnju sa BiH (2011-2014). Područje okoliša vrlo je relevantno za evropske integracije i sadrži neke uvjete čije ispunjenje je teško i skupo. Postoje hitni problemi koje bi trebalo riješiti. Švedska posjeduje iskustva koja bi mogla postati korisna u mnogim od potencijalnih područja saradnje. Stoga svesrdno pozdravljam temu konferencije usmjerene na opasni i neopasni čvrsti otpad. Pravilno i brzo rješenje problema čvrstog otpada sigurno će biti važan sastavni dio naših zajedničkih napora kako bi se postiglo opće poboljšanje okoliša u BiH, razvoj koji može biti od koristi za svakoga. Švedska je odlučila da usmjeri važan segment njezine tekuće i buduće pomoći na rješavanje problema čvrstog otpada. Stoga nas raduje pojačana suradnja sa svim relevantnim sugovornicima u ovom području.



H/E Bosse Hedberg,

Ambassador of the Kingdom of Sweden in BiH, a personal comment

We all know that BiH is endowed with great natural riches but also that they are severely mismanaged. Rivers are heavily polluted by uncontrolled sewage and dumping of wastes. Thousands of plastic bottles float on the rivers and millions of plastic bags hang on the bushes by the riversides. Huge quantities of metal is thrown away every year instead of being recycled. The air is polluted by the use of low-energy coal for heating and by aged vehicles, many of which have apparently not passed any kind of technical inspection. Deforestation is still a problem and there is a need to substantially increase the protected areas in order to preserve the country's biodiversity. We are well aware that much of the BiH infrastructure was ruined by the recent war. In addition, a lack of investments caused by mistrust in the legal and business environment, and more recently by the global recession, remain serious obstacles for development. On top of that, the current environmental conditions hamper the country's ambition to boost and profit from tourism, including eco-tourism. Against this background it is most welcome that BiH gradually has begun to embrace international conventions and European environmental standards. As the country moves towards candidacy status with the EU, institutional efforts and practical measures at municipal, entity and state levels need to be accelerated. But the capacity to implement environmental standards must be enhanced. The legal enforcement of environmental policy and economic incentives would greatly improve the situation. Within the framework of its development assistance, Sweden promotes environmental protection in other parts of the world. This is also true in Bosnia and Herzegovina. Recently, a Municipal Programme for Solid Waste Management was launched. The total value of that programme is approximately 20 million KM and its main aim is to assist a number of municipalities of BiH to collect, sort, reduce, and dispose its waste in economically-sound and environmental-friendly ways. The environment sector is suggested to become the third

cooperation area of the next Swedish strategy for BiH (2011-2014). The area of environment is highly relevant for European integration and contains some of the more difficult and expensive compliance conditions. There are apparent needs to be addressed. There are also Swedish experiences that could become useful in many of the potential areas of cooperation. I therefore wholeheartedly welcome that the theme of the conference is focused on hazardous and non-hazardous solid waste. The proper and rapid solution to the problems of solid waste will certainly be an important part and parcel of our joint efforts to achieve a general improvement of the environment in BiH, a development which can only be beneficial to everyone. Sweden has decided to concentrate an important segment of its current and future assistance to the solution of the solid waste problem. We therefore look forward to an enhanced cooperation with all the relevant interlocutors in this field.



Branimir Gvozdenović

ministar uređenja prostora i zaštite
životne sredine Republike Crne Gore

Najvažniji resurs kojim raspolaže Crna Gora je prostor. Prirodne ljepote, raznovrnost i kontrasti na malom prostoru su vrijednosti kojom raspolažu

i valorizuju sadašnje generacije, a od kojih mogu i trebaju da imaju koristi buduće generacije. Tokom posljednjih desetak godina, Crna Gora je ponovo postala izuzetno interesantna i tražena turistička destinacija. Istovremeno sa porastom broja turista koji posjećuju Crnu Goru, poraslo je interesovanje investitora za ulaganje, posebno u oblasti izgradnje turističkih kapaciteta. Ovakva situacija, kao i činjenica da je Crna Gora Ustavom deklarirana kao ekološka država i država koja očekuje da će tokom 2010. godine dobiti status zemlje kandidata za ulazak u porodicu evropskih naroda, nametnula je potrebu obezbjeđivanja adekvatnih infrastrukturnih pretpostavki, posebno u dijelu komunalnih djelatnosti vodosnabdijevanja, upravljanja otpadnim vodama i upravljanja otpadom. Svjesna činjenice da i naši građani, a posebno mnogobrojni turisti ukoliko budu nezadovoljni čistoćom javnih površina, kvalitetom vodosnabdijevanja ili očuvanošću vodnih resursa mogu imati slabije uslove za život, odnosno pokvariti sliku o Crnoj Gori kao izuzetnoj destinaciji za odmor i rekreaciju, Vlada Crne Gore je kao jedan od svojih prioriteta utvrdila izgradnju komunalne infrastrukture. U oblasti upravljanja otpadom usvojena je Nacionalna politika za upravljanje otpadom (2004), Strateški Master plan za upravljanjem otpadom na republičkom nivou (januar, 2005) i Plan upravljanja otpadom za period od 2008-2012. godine (februar 2008. godine). Strateški master plan za upravljanje otpadom na republičkom nivou, predviđeno je da se do 2014. godine u oblast upravljanja otpadom u Crnoj Gori investira oko 120 miliona € i to u izgradnju sedam regionalnih sanitarnih deponija za potrebe svih

21 opštine, sanaciju postojećih odlagališta, za nabavku opreme i sredstava za bolju tehničku opremljenost javnih komunalnih preduzeća, za rješavanje pitanja odlaganja opasnog otpada. U cilju usklađivanja domaće zakonske regulative sa EU direktivama i stvaranja pravnog okvira za implementaciju Strateškog master plana za upravljanje otpadom na republičkom nivou 2005. godine je donešen Zakon o upravljanju otpadom.

Branimir Gvozdenović

Minister of Spatial Planning and Environmental Protection of the Republic
Montenegro

Space is the most important resource of Montenegro. Natural beauties, diversity and contrasts within a small area are the values available to and valorized by the present generations, and those that the future generations should benefit from. Over the recent decade, Montenegro has become once again an exceptionally interesting and desirable tourist destination. In parallel with an increase in the number of tourists visiting Montenegro, the investors also became increasingly interested in engaging in investment activities, especially relating to the development of tourist capacities. Such a situation, in addition to the fact that Montenegro was declared an ecological State under its Constitution and that in 2010 it expects to be granted the status of a candidate country to join the family of European nations, imposed an obligation to ensure adequate infrastructure prerequisites, especially those relating to the communal activities of water supply, wastewater and solid waste management. Conscious of the fact that our citizens, and especially numerous tourists, should they not be satisfied with the cleanliness of public areas, quality of water supply services and the level of preservation of water resources, may have worse living conditions, and that the picture of Montenegro as an exceptional destination for relaxation and recreation may be ruined, the Government of Montenegro identified the development of communal infrastructure as one of its main priorities. In the area of waste management, the following documents were adopted: The National Waste Management Policy (2004); The National Waste Management Master Plan (January 2005); and the Waste Management Plan for the period 2008-2012 (February 2008). Until 2014, as anticipated by the Strategic Master Plan for Waste Management, the investment activity in the area of waste management in Montenegro will be worth approximately EUR 120 million, including the construction of seven regional sanitary landfills to be used by all 21 municipalities, reconstruction of the existing waste disposal sites, procurement of the

equipment and supplies to improve the level of technical equipment of the public communal enterprises, and a resolution to the issue of hazardous waste disposal. Aiming to harmonize the national legislation with the EU Directives and create the legal framework to implement the Strategic National Master Plan for Waste Management, the Law on Waste Management was adopted in 2005.





dr.sc. Nikola Ružinski

državni tajnik u Ministarstvu zaštite okoliša, prostornog uređenja i graditeljstva Republike Hrvatske

Proteklih nekoliko godina Ministarstvo zaštite okoliša, prostornog uređenja i graditeljstva Republike Hrvatske intenzivno je radilo na donošenju niza

propisa vezanih uz različita područja zaštite okoliša, kao što su borba protiv klimatskih promjena, zaštita zraka i ozonskog sloja, sprječavanje industrijskog onečišćenja te održivo gospodarenje otpadom. Hrvatski sabor donio je 2005. godine Strategiju gospodarenja otpadom RH, a Vlada Republike Hrvatske donijela je 2007. godine Plan gospodarenja otpadom u RH za razdoblje 2007.-2015. Nizom zakona, pravilnika i uredbi, kao što su npr. *Zakon o otpadu, Pravilnik o gospodarenju otpadom, Pravilnik o gospodarenju otpadnim gumama, Pravilnik o ambalaži i ambalažnom otpadu, Pravilnik o gospodarenju otpadnim uljima, Pravilnik o gospodarenju otpadnim baterijama i akumulatorima, Pravilnik o gospodarenju otpadnim vozilima, Pravilnik o načinu i postupcima gospodarenja otpadom koji sadrži azbest, Pravilnik o gospodarenju građevnim otpadom, Pravilnik o postupanju medicinskim otpadom*, i još mnogim drugim prenesene su europske direktive, odnosno usklađeno je hrvatsko zakonodavstvo s zakonodavstvom EU. I dalje se aktivno prate sve izmjene i dopune propisa EU te prema potrebi prilagođavamo odredbe naših propisa. Pokrenute su sve mjere za uspostavu sustava gospodarenja otpadom, a posebno su se značajni rezultati postigli u sustavu odvajanja i prikupljanja otpada po kategorijama. Donošenjem posebnih pravilnika, u Republici Hrvatskoj danas je:

- u potpunosti uspostavljen sustav skupljanja i oporabe ambalažnog otpada, automobilskih guma te električnog i elektronskog otpada
- uspostavljen sustav skupljanja i primarne obrade baterija i akumulatora
- u fazi uspostave sustav skupljanja i obrade medicinskog otpada, građevinskog otpada i ostalog polimernog otpada.

Planom gospodarenja otpadom jasno je određena hijerarhija gospodarenja otpadom te je prema tome na prvom mjestu izbjegavanje nastajanja otpada, zatim primarna selekcija korisnog otpada (organizirano kroz sustav koncesija – ambalažni otpad, gume, automobili, ulja, EE, baterije), selektivno skupljanje, obrada otpada te zbrinjavanje otpada u centrima za gospodarenje otpadom. Izgrađena su moderna postrojenja za reciklažu i oporabu električnog i elektronskog otpad, otpadnih automobilske guma, starih vozila, otpadnih ulja, ambalažnog otpada, akumulatora i baterija tako da se većina opasnog otpada rješava upravo kroz te sustave. Također, Planom je predviđen maksimalno jedan centar gospodarenja otpadom po županiji, odnosno moguća je uspostava jednog centra za više županija ukoliko se radi o županijama s manjom površinom i manjim brojem stanovnika. U pregovorima za ulazak u Europsku uniju obvezali smo se da ćemo izgraditi nove Centre za gospodarenje otpadom i u potpunosti sanirati i zatvoriti današnja odlagališta otpada. Izgradnja centara financirat će se 20% iz sredstava lokalne samouprave, a 80% iz sredstava Fonda za zaštitu okoliša i EU fondova. Veliki broj županija predvidio je izgradnju centara za gospodarenje otpadom te su lokacije budućih centara unesene i u prostorne planove. Dio predviđenih centara je već u fazi izgradnje, a za drugi dio se izrađuje projektna dokumentacija te se koriste sredstva iz pretpristupnih fondova Europske unije. Najvećim uspjesima u gospodarenju otpadom smatramo sanacije odlagališta te uspostavu sustava odvojenog prikupljanja (primarne selekcije) i reciklaže korisnog otpada.



Ph.D. Nikola Ružinski

State Secretary in the Ministry of Environmental Protection, Physical Planning and Construction of Republic of Croatia

Over the past few years the Ministry of Environmental Protection, Physical Planning and Construction has been working intensively on adopting various regulations concerning different fields of environmental protection, such as the fight against climate change, protection of air and ozone layer, prevention of industrial pollution and sustainable waste management. In 2005 the Croatian Parliament adopted the Waste Management Strategy of the Republic of Croatia, and in 2007 the Government of the Republic of Croatia adopted the Waste Management Plan in the Republic of Croatia for the period from 2007 to 2015. By many acts, regulations and ordinances, such as Waste Act, Ordinance on Waste Management, Ordinance on Waste Tire Management, Ordinance on Packaging and Packaging Waste, Ordinance on Waste Oil Management, Ordinance on Waste Batteries and Accumulators, Ordinance on the Management of the End-of-life Vehicles, Ordinance on the method and procedures for asbestos waste management, Ordinance on construction waste management, Ordinance on Medical Waste and many others, European directives have been transposed, i.e. Croatian legislation has been aligned with EU legislation. We follow continually and actively all amendments of EU legislation and align dispositions of our regulations accordingly. All measures have been taken for establishing the waste management system, and highly significant results have been achieved in the system of waste separation and collection by categories. By adopting special ordinances, today, the Republic of Croatia

- has a fully established system of waste collection and disposal of packaging waste, automobile tires and electrical and electronic waste
- has an established system of collection and primary treatment of batteries and accumulators
- is in the phase of establishing the system of collection and treatment of medical waste, construction waste and other polymer waste

The Waste Management Plan clearly defines the hierarchy

of waste management. According to the Plan, the first place takes the waste generation avoidance, followed by the primary selection of useful waste (organized through the system of concessions – packaging waste, tires, automobiles, oils, EE waste, batteries), selective collection, waste treatment and waste disposal in waste management centers. Modern facilities have been constructed for recycling and recovery of electrical and electronic waste, waste automobile tires, end-of-life vehicles, waste oils, packaging waste, accumulators and batteries, thus taking care of the majority of hazardous waste. Moreover, the Plan envisages one waste management centre per county at most, i.e. it is possible to establish one center for more than one county in case of counties with smaller surface and lesser number of inhabitants. In EU accession negotiations we obliged ourselves to build new waste management centers, fully remediate and close the existing landfills. The construction of waste management centers will be financed by the local self-government funds (20%) and Environmental Protection Fund and EU funds (80%). A large number of counties has envisaged the construction of waste management centers, and locations of future centers have been included in physical plans. One part of envisaged centers is already under construction, whereas for the other part the project documentation is being drawn up and EU pre-accession funds are being used. Landfill restoration, as well as the establishment of separate waste collection (primary selection) and useful waste recycling system is considered to be our major success in the field of waste management.



Vinko Mladineo

direktor Fonda za zaštitu okoliša
i energetska učinkovitost Republike
Hrvatske

Veliko mi je zadovoljstvo i osobita čast što mi je omogućeno da sudjelujem u radu ove konferencije koja ne samo da ima značenje za Bosnu

i Hercegovinu nego i za cijelu regiju. Ova konferencija nije samo iskorak Bosne i Hercegovine u rješavanju problema upravljanja opasnim i neopasnim otpadom već je jamstvo za ostvarenje vizije ekološki prihvatljivog održivog gospodarskog razvoja Bosne i Hercegovine i cijele regije. Stoga primite moje čestitke i pohvale uz napomenu da ova i slične konferencije samo određuju put a rezultate ćemo dobiti u zaštiti okoliša i u upravljanju opasnim i neopasnim otpadom samo jednim kontinuiranim ulaganjem u projekte gospodarenja otpadom i ulaganjem u podizanje ekološke svijesti. Hrvatska je u svome ekološkom sazrijevanju odredila svoje smjernice i trasirala put ekološkog razvoja poštujući one ciljeve koje su odredile direktive Europske unije i dobra praksa zemalja članica. Prepreka je bilo mnogo, što više, čak i nerazumijevanja i neshvaćanja da je zaštita okoliša perspektiva održivog gospodarskog razvoja i jamstvo da će naša buduća pokoljenja uživati u očuvanju okoliša i lijepoj prirodi, ali ne samo to već i gospodariti prirodnim resursima koje ćemo im ostaviti u nasljeđe i koji će im stvarati perspektivu života i rada. Hrvatska je stvorila zakonodavne okvire u zaštiti okoliša, posebno u upravljanju opasnim i neopasnim otpadom, donijela Strategiju gospodarenja otpadom Republike Hrvatske, Plan gospodarenja otpadom na temelju kojeg su svoje planove donijeli županije, gradovi i općine, ali to nije bio kraj. Ona je uz korištenje svojih raspoloživih financijskih resursa, tehničkih i ljudskih potencijala učinila iskorak koji jamči postizanje onih ciljeva koje su zacrtale i sve zemlje

Europske unije. Da bi se ostvarili ciljevi ove konferencije potrebno je podržavati i dalje visoku razinu stručne i ine suradnje i razmjenu iskustva i postignuća na području zaštite okoliša. U tom duhu i u tom cilju želim Vam uspješan rad i ostvarenje zadaće ove konferencije.

Vinko Mladineo

Director of Environmental Protection and Energy Efficiency Fund of the Republic of Croatia

It is a great pleasure and a great honour to participate in the work of this conference, which is of great significance not only to Bosnia and Herzegovina, but to the entire region as well.

This conference represents not only a step forward by Bosnia and Herzegovina towards dealing with the issues of hazardous and non-hazardous waste management, but guarantees the realization of the vision of environmentally acceptable sustainable economic development of Bosnia and Herzegovina and the entire region. Therefore, please accept my congratulations and commendation, as this conference and similar ones only pave the way, while the results would be seen in environmental protection and hazardous and non-hazardous waste management with continuous investing in waste management projects and in raising environmental awareness. In its environmental growth, Croatia has defined its direction and paved the way to environmental development by following the objectives set by European Union Directives and the good practice from Member States. There were numerous obstacles on the way, even lack of understanding of the fact that environmental protection represents a prospect for sustainable economic development and a guarantee for the future generations to enjoy environmental protection and beautiful nature, as well as manage the natural resources they will inherit, which will create life and work prospects. Croatia has provided a legal framework for environmental protection, in particular for hazardous and non-hazardous waste management, has passed the Waste Management Strategy of the Republic of Croatia and the Waste Management Plan, on the basis of which all counties, cities and municipalities have passed their own plans. But this was not all. Putting in use its available financial resources as well as its technological and human resources, Croatia has made a step forward, guaranteeing the achievement of goals defined by all Member States. In

order to meet the goals of this conference, it is necessary to continue to support a high level of technical and other cooperation and the exchange of experiences and achievements in the field of environmental protection. In this spirit, I wish you all success in your work and the achievement of goals of this conference.



Četvrtak, 11. veljače 2010.
HOTEL ZENICA

8.00 – 10.00 Registracija sudionika

PLENARNI HOL

10.00 - 10.30 CEREMONIJA SLUŽBENOG OTVARANJA

Pozdravna izlaganja

dr. sc. Nevenko Herceg, ministar okoliša i turizma F BiH

Mladen Zirojević, ministar vanjske trgovine i ekonomskih odnosa BiH

Husein Smajlović, načelnik Općine Zenica

Mustafa Mujezinović, premijer Federacije BiH

Borjana Krišto, predsjednica Federacije BiH

10.30 - 13.00 UPRAVLJANJE OTPADOM -RAZLIČITA ISKUSTVA

Uvodna izlaganja

NJ. E. Kirsten Rosenvold Geelan, veleposlanica Kraljevine Danske u BiH

NJ. E. Bosse Hedberg, veleposlanik Kraljevine Švedske u BiH

Marco Mantovanelli, direktor Ureda Svjetske banke u BiH

Dr. Johann Hesse, prvi tajnik Delegacije Europske komisije u BiH i voditelj sektora za gospodarski razvitak, trgovinu i prirodne resurse

Iskustva iz regije

Dr. sc. Nikola Ružinski, državni tajnik Republike Hrvatske

Iskustva upravljanja otpadom u RH

Dr. Oliver Dulić, ministar Republike Srbije

Iskustva upravljanja otpadom Srbiji

Branimir Gvozdenović, ministar uređenja prostora i zaštite životne sredine Crne Gore

Iskustva upravljanja otpadom u Crnoj Gori

11.30 – 12.00 Stanka

Iskustva iz regije

Zdenka Bubeniková, direktorica Odjela upravljanja otpadom u Republici Češkoj, Iskustva upravljanja otpadom u Češkoj,

Ana Karanfilova Maznevska, Ministarstvo okoliša i prostornog planiranja Republike Makedonije; Iskustva upravljanja otpadom u Makedoniji

Gerald Schmidt, Saubermachen Dienstleistungen Aktiengesellschaft, Graz, Austrija

Prezentacija EU propisa i specifičnih uvjeta- iskustva iz Austrije i drugih EU zemalja

Franc Knaus, Saubermacher, Slovenija

Iskustva upravljanja otpadom u Sloveniji

13.00 – 14.00 Stanka za objed

14.00 – 18.00 RAD U SESIJAMA

PLENARNI HOL

14.00 – 18.00 SESIJA I.aK orisni dio komunalnog otpada

15.45 – 16.15 Stanka

Moderatori: dr. sc. Tarik Kupusović, prof. dr. sc. Nikola Ružinski, Tomislav Lukić

Vinko Mladineo, direktor Fonda za zaštitu okoliša i energetske učinkovitost RH; Upravljanje korsnim dijelom komunalnog otpada Republici Hrvatskoj
Gill Bevington, Perchards Ltd, St.Albans, Ujedinjeno Kraljevstvo; Uticaj EU Direktive 94/62 o ambalazi i ambalaznom otpadu na okoliš i unutrašnje tržište
Christian Mayer, ARA - Beč, Austrija; Implementacija sistema upravljanja ambalazom i ambalaznim otpadom na primjeru Austrije
Mugurel Radulescu, ECO ROM AMBALAJE - Bukurest, Rumunjska; Primarna selekcija ambalaznog otpada - iskustvo Rumunije
Sabine Strnad, Resource Recovery Manager, Coca-Cola Hellenic, Beč, Austrija; Upravljanje ambalažom i ambalažnim otpadom - rješenja u zemljama Europe.
Koraci planiranja i implementacije programa reciklaže

Šefket Turalić, Venan Hadžiselimović, Ermelina Čostović, Adnan Lihčić i Suad Huskić, Tešanj, BiH;

Eko vizija Općine Tešanj kroz program zbrinjavanja ambalažnog otpada

dr. sc. Jovan Sredojević, Mašinski fakultet Univerziteta u Zenici, BiH; Značaj reciklaže starih automobila i aparata bijele tehnike za zaštitu okoliša iz procesa proizvodnje čelika u elektrolučnoj peći

Muvedet Šišić, ALBA doo, Zenica, BiH; Analiza sistema primarne obrade starog papira u preduzeću ALBA Zenica

Emil Šehić, ZEOS doo, Ljubljana, Slovenija; Prikupljanje i obrada otpadne električne i elektronske opreme

Nebojša Vraneš, S.E. Trade, Beograd, Srbija; Transport, sakupljanje i recikliranje elektroničkog otpada i elektroničke opreme u Srbiji

Almir Bajtarević, Tvornica cementa Kakanj, BiH; Otpadne gume kao alternativno gorivo u cementnoj industriji

Đuro Horvat, Tehnix d.o.o., Donji Kraljevec, Hrvatska; MBT tehnologija za selekciju neselektiranog komunalnog otpada

Damijan Kravos, Saubermachen d.o.o., Slovenija; Primjena nacrtu sa program rukovanja sa komunalnim otpadom i sistemom sakupljanja otpada za reciklažu u sistemu "regiona"

Amela Hrbat, Bihpak- Sarajevo, BiH; Upravljanje ambalažom i ambalažnim otpadom u BiH

Tomislav Lukić, mr. sc. Mehmed Cero, Međunarodno tijelo, BiH; Mogući modeli upravljanja korisnim dijelom komunalnog otpada za F BiH

DVORANA II

14.00 – 18.00 SESIJA I.b Upravljanje opasnim i industrijskim otpadom

15.45 – 16.15 Stanka

Moderatori: Kasema Čatović, dr. sc. Damir Subašić, dr. sc. Aleksandar Knežević, Mladen Rudež

Dr. sc. Aleksandar Knežević, Regionalni centar za edukaciju i informacije iz održivog razvoja za Jugoistočnu Evropu (REIC), Sarajevo, BiH; Koncept operacionalizacije upravljanja otpadom u BiH

Dr. sc. Damir Subašić i Staša Zovko – Čeramilač, APO d.o.o., Zagreb; Tomislav Lukić, FMOiT, Hrvatska i BiH; Iskustva na projektima sanacija onečišćenih područja

dr. sc. Ferdo Bašić, dr. sc. Ivica Kisić, dr. sc. Nevenko Herceg, FMOiT, Aleksandra Jurišić, Krunoslav Sajko, Sveučilište u Zagrebu, Agronomski fakultet, Zavod za opću proizvodnju bilja; Stanje tala kao kriterij za ocjenu djelotvornosti sanacije odlagališta komunalnog otpada grada Nove Gradiške

Renata Pavlina, Fond za zaštitu okoliša i energetske učinkovitost, Zagreb, Hrvatska; Aktivnosti Fonda za zaštitu okoliša i energetske učinkovitost na sanaciji opasnog otpada

Emil Nanut i Boštjan Šimenc, Kemis d.o.o.; Peter Kovač, Gorenje d.d., Energetika in varstvo okolja, Slovenija; Sanacija odlagališta gudrona

Zoran Matić, Kemis – Termoclean d.o.o., Zagreb, Hrvatska; Izvoz opasnog otpada – pravno procesni i operativno logistički vidik

Ivica Grlić Radman, Agroproteinka d.d., Sessvetki Kraljevac, Hrvatska; Koncept zbrinjavanja životinjskih nusproizvoda u BiH prema propisima EU

Ante Rezić, Velimir Čavar, Jela Lukić, Aluminij d.d. Mostar, BiH; Upravljanje otpadom u Aluminiju d.d. Mostar

Mr.sc. Vilma Fece, Gorenje d.d. Velenje, Slovenija; Sistem cjelovitog upravljanja sa okolinom u grupi Gorenje

Nihad Akeljić, Sisecam Soda Lukavac d.o.o., BiH; Uticaj optimizacije procesa proizvodnje na poboljšanje zaštite okoliša

Mladen Rudež, dr. sc. Nevenko Herceg, FMOiT, Sarajevo; Značaj okolišne dozvole i plana upravljanja otpadom u provođenju prevencije i kontrole zbrinjavanja otpada u BiH

Sanja Grabar, Vesna Šabanović, CIAK d.o.o. Zagreb, Hrvatska; Uspostava sustava gospodarenja otpadom unutar velikih gospodarskih sustava

dr. sc. Jovan Sredojević, Mašinski fakultet Univerziteta u Zenici, BiH; Pravci istraživanja za uspostavu integralnog sistema upravljanja – privrede otpada

dr. sc. Aziz Mujzinović, Azra Sivo, Mirnesa Mujkić, Arcelor Mittal, BiH; Upravljanje otpadom u industriji čelika na primjeru ArcelorMittala Zenica

dr. sc. Husnija Resulović, mr. sc. Esad Bukalo, Damir Behlulović, Sarajevo, BiH; Antropogena degradacija, urbanizacija, industrijalizacija i rudarenje – uzroci oštećenja i uništenja zemljišta – preventiva i sanacija

Drago Mir, Saubermacher d.o.o., Slovenija; Opasni otpad – karakterizacija – transport – skladištenje i snabdjevanje

dr. sc. Rok Rotar, Surovina d.d., Slovenija; Cjelovito upravljanje otpadom-primjer iz automobilske industrije

20.00 Svečana večera u Hotelu Dubrovnik

Petak, 12. veljače 2010. HOTEL ZENICA

9.30 – 18.00 RAD U SESIJAMA

PLENARNI HOL

9.30 – 13.00 SESIJA II.a Aspekti upravljanja komunalnim otpadom

11.00 – 11.30 Stanka

Moderatori: dr. sc. Viktor Simončić, mr. sc. Mehmed Cero, Danko Fundurulja

dr. sc. Nevenko Herceg, mr. sc. Mehmed Cero, FMOIT, Sarajevo, BiH; Otpad u izvješću o stanju okoliša Federaciji BiH

dr. sc. Čedomir Crnogorac, mr. sc. Dušica Pešević, PMF Banjaluka, BiH; Osnovne karakteristike sistema upravljanja komunalnim otpadom u RS-u

Renata Pavlina, Fond za zaštitu okoliša i energetske učinkovitost, Zagreb, Hrvatska; Sustav gospodarenja komunalnim otpadom u Republici Hrvatskoj

dr. sc. Viktor Simončić, VIKOS, Sisak, Hrvatska; Tomislav Lukić, FMOIT, Sarajevo, BiH; Optimiranje troškova postupaka s komunalnim otpadom

dr. sc. Damir Barčić, dr. sc. Tomislav Dubravac, dr. sc. Željko Španjol, Šumarski fakultet Sveučilišta u Zagrebu, Hrvatska; Upravljanje komunalnim otpadom na jadranskim otocima

Mr Gunnar Linder, Grontmij- Carl Bro, team leader for Sida funded programme for solid waste managemen in BiH, Švedska;

Upravljanje komunalnim otpadom u općinama

dr. sc. Tarik Kupusović, Institut za hidrotehniku Građevinskog fakulteta u Sarajevu, Almir Mulaomerović, KJPK RAD, BiH; Uticaj tehnologije odlaganja komunalnog otpada na emisiju metana i mogućnost njegovog korištenja

Massimo Tomassoni, AnconAmbiente S.p.A., Italija; Pokretanje službi forsiranog diferenciranog prikupljanja za 100.000 stanovnika (od vrata do vrata)

Giuseppe Tomasso Sanfilippo, AnconAmbiente S.p.a, Italija; Rezultati postignuti u prvim godinama funkcioniranja službe forsiranog diferenciranog prikupljanja za 100.000 stanovnika (od vrata do vrata)

Danko Fundurulja, IPZ, Zagreb, Hrvatska; Tomislav Lukić, FMOIT, Sarajevo BiH; Sanacija odlagališta otpada u Republici Hrvatskoj (do kraja 2009.godine)

Mario Zovko, Krešimir Šaravanja, IGH Mostar, BiH; Taložni prah – mjerenje nultog stanja na području planirane deponije otpada

mr. sc. Emil Šterbenk, ERICo, d.o.o. Celje, Slovenija; Planiranje, edukacija i komunikacija-osnovi za uspješno upravljanje otpadom

dr. sc. Zoran Milašinović, Građevinski fakultet Univerziteta u Sarajevu; Pilot projekt mehaničko-biološke obrade otpada na lokalitetu Vlaški Do u Bosanskoj Krupi

Davorin Marković, mr. sc. Roman Ozimec, mr. sc. Neven Trenc, Državni zavod za zaštitu prirode Hrvatsko biospeleološko društvo, Hrvatska; Problem nedozvoljenog odlaganja otpada u speloeloškim objektima

DVORANA II

9.30 – 13.00 SESIJA II.b Gospodarsko finansijski aspekti sustava upravljanja otpadom

11.00 – 11.30 Stanka

Moderatori: prof. dr. sc. Zoran Milašinović, mr. sc. Muris Hodžić, dr. sc. Tomislav Dubravac

Maja Maretić Tiro, Enova d.o.o., Fethi Silajdžić, Enova d.o.o., Emir Zukić, Regionalna deponija "Moščanica" d.o.o. Zenica, Maja Čolović Daul, Enova d.o.o., Lejla Tabaković, Enova d.o.o., BiH; Javno privatno partnerstvo u sektoru upravljanja otpadom u Bosni i Hercegovini

Joachim Quoden, General Manager PRO EUROPE, Brisel, Belgija; Ekonomski aspekti integriranog upravljanja otpadom u Europi sa fokusom na ambalažni otpad

Saša Avirović, GKP Čakom, Čakovec, Hrvatska; Struktura cijene usluge postupanja s otpadom

Giuseppe Razza, Eptisa, Španjolska; Mehanizam financiranja, dostupni finansijski resursi i privatno – javno partnerstvo za financiranje upravljanja opasnim otpadom u BiH

dr. sc. Nevenko Herceg, Mate Bandur, Muris Hadžić, mr. Sc. Mehmed Cero, Tomislav Lukić, Anto Čović, Amra Krajina, FMOiT, Sarajevo, BiH; Model financiranja projekta Upravljanje čvrstim otpadom u BiH

Maja Čolović Daul, Fethi Silajdžić, Maja Maretić Tiro, Adi Habul, Institucija: Enova d.o.o., BiH; Sanacija postojećeg odlagališta otpada u općini Gračanica

Jochen Trommer, Alba Group Berlin, Njemačka; Inovativni smjerovi u postupanju sa otpadom

13.00 – 14.00 Stanka za objed u Hotelu Zenica

PLENARNI HOL

14.00 – 18.00 SESIJA III. Postignuća u tehnologijama upravljanja otpadom

15.45 – 16.15 Stanka

Moderatori: mr. sc. Emil Šterbenk, Mate Bandur, dr. sc. Aziz Mujezinović

mr. Willi Stadler, Beč, Austrija; Moderne razvojne aktivnosti u pravcu uspostavljanja sortiranja i RDF -a

mr. Pierangelo Tondeli, Company SATRIND S.p.a, Italija; Tehnologije procesuiranja opasnog otpada

mr. Pierangelo Tondeli, Company SATRIND S.p.a, Italija; Napredak u tehnologiji gasifikacije koji omogućava njenu ekonomsku potrebu za sigurnim tretmanom otpada i štetnog otpada u kombinaciji sa stvaranjem čiste energije

dr. sc. Dušan Klinar, Aleksander Dolenc, ZRS BISTRA Ptuj, RADIX Ptuj, Slovenija; Novi koncept rada na deponijama u euroregijama

"ZERO WASTE" – tehnologije koje dolaze

Irem Silajdžić, Institut za hidrotehniku G.F u Sarajevu, BiH; Anaerobna digestija: tehnologija za održivo upravljanje (bio)otpadom – primjer tretmana otpadne sirovine iz tehnologije prerade krompira

Ivica Budiša, Strabag AG Austria Beč; Mogućnost obrade opasnog i neopasnog otpada na primjeru kompletnog operatora

Petar M. Gvero, Univerzitet u Banjaluci, Mašinski fakultet, Banja Luka; Mićo Marčeta, EMPES d.o.o., Banja Luka; Vanja Ćirin, DVOKUT PRO, Sarajevo; Slaviša Jelisić,

LIR Consulting, Banja Luka; Aleksandra Stanivuković, LIR Consulting, Banja Luka; Benjamin Buzar, DVOKUT PRO, Sarajevo, BiH; Sistem za inseneraciju životinjskog otpada EMPES koji koristi biomasu kao pomoćno gorivo

mr. sc. Miroslav Emling, Željko Šmitran, IND-EKO d.o.o. Rijeka, Hrvatska; Iskustva u obradi onečišćenog tla tehnologijom termalne desorpcije

18.00 Završetak radnog dijela konferencije

Subota, 13. veljače 2010.

9.00 – 13.00 Obilazak Regionalnog centra za upravljanje otpadom "Moščanica" i posjet turističkim atrakcijama Zeničko-dobojskog kantona

Thursday, 11th February year 2010
HOTEL ZENICA

8.00 – 10.00 hrs. Registration and Accreditation

PLENARY CONFERENCE ROOM

10.00 - 10.30 hrs. THE OFFICIAL OPENING CEREMONY

Introductory speeches

Ph.D. Nevenko Herceg, Minister of Environment and Tourism Government of Federation of BiH and President of the Conference Organizing Committee

Mladen Zirojević, Minister of Foreign Trade and Economic Relations of BiH

Husein Smajlović, Mayor of Zenica

Mustafa Mujezinović, Prime Minister of the Government of FBiH

Borjana Krišto, President of Federation of BiH

10.30 - 13.00 hrs WASTE MANAGEMENT-A DIFFERENT EXPERIENCE

Introductory presentations

H/E Ms. Kirsten Geelan, Ambassador of Denmark to BiH

H/E Mr. Bosse Hedberg, Ambassador of Sweden to BiH

Marco Mantovanelli, director of the World bank to BiH

Ph.D. Johann Hesse, First Secretary of the EC Delegation in BiH, and Head of sector for economic development, trade and natural resources

Experiences from the region

Nikola Ružinski, State Secretary of the Republic of Croatia, Experience of the waste management in Republic of Croatia

Ph.D. Oliver Dulić, minister of the Republic of Serbia, Experience of the waste management in Serbia

Branimir Gvozdenović, Minister of Spatial Planning and Environmental Protection of the Republic Montenegro,

Experience of the waste management in Montenegro

11.30-12.00 hrs Break

Mrs. Zdenka Bubeniková, Waste Management in the Czech Republic Experience of the waste management in Czech Republic, Waste Department director

Ana Karanfilova Maznevska, Ministry of Environment and Physical Planning of Republic of Macedonia, Waste Management in Republic of Macedonia,

Experience of the waste management in Macedonia,

Gerald Schmidt, Saubermachen Dienstleistungen Aktiengesellschaft, Graz, Austria, Presentation of EU-regulations and specific conditions – experiences from Austria and other EU Countries

Franc Knaus, Saubermacher Slovenija doo, Experience of the waste management in in Slovenia

13.00 – 14.00 hrs Lunch

14.00 – 18.00 hrs WORK IN THE SESSIONS

PLENARY CONFERENCE ROOM

14.00 – 18.00 hrs I a. session USEFUL PART OF THE MUNICIPAL WASTE

15.45 – 16.15 hrs Break

Moderators: Ph.D. Tarik Kupusović, Prof. Ph.D. Nikola Ružinski, Tomislav Lukić

Strengthening of the waste management system in underdeveloped european countries through IPA funds

Vinko Mladineo, director of the Fund for protection of environment and energy efficiency Republic of Croatia, Useful part of the communal waste management in Republic of Croatia

Gill Bevington, Percharads Ltd, St.Albans, United Kingdom, Influence of the EU Directive 94/62 on packaging and packaging waste on the environment and internal market

Christian Mayer, ARA - Vienna, Austria; Implementation of the packaging and packaging waste management system shown on the example of Austria
Mugurel Radulescu, ECO ROM AMBALAJE - Bucharest, Romania, Primary selection of the packaging waste - experience of Romania

Sabine Strnad, Resource Recovery Manager, Coca-Cola Hellenic, Vienna, Austria, Packaging and waste packaging management – solutions in the countries of Europe. Steps of planning and implementation of recycling programme"

Šefket Turalić, Venan Hadžiselimović, Ermelina Čostović, Adnan Lihčić i Suad Huskić, Tešanj BiH, Eco vision of the Tešanj municipality through the programme of the packaging waste management

Prof.Ph. D. Jovan Sredojević, Mechanical engineering faculty of the University in Zenica, The significance of recycling of the old vehicles and household appliances for the protection of the environment from the process of the production of steel in the electric arc/furnace"

Muvedet Šišić, ALBA d.o.o. Zenica, Analysis of the systems of primary processing of the old paper in the company „ALBA Zenica

Emil Šehić, ZEOS d.o.o., Collection and processing of the waste electrical and electronic equipment

Nebojša Vraneš, S.E. Trade, Transport, Collection and Recycling of Waste Electrical and Electronic Equipment in Serbia

Almir Bajtarević, Tvornica Kakanj, BiH, Car tirs as alternative fuel in the cement industry

Đuro Horvat, Thenix doo, Donji Kraljevec, Croatia, MBT Technology for selection of unselected municipal waste

Damijan Kravos, Saubermachen Slovenija d.o.o., Application of the draft with the programme of handling with the municipal waste and system of waste collection for recycling in the system of „regions

Amela Hrbat, Bihpak- Sarajevo, BiH, Packaging and waste packaging management in BiH

Tomislav Lukić, MSc Mehmed Cero, Inter-entity body, BiH; Potential models of useful part of the municipal waste management for F BiH

CONFERENCE ROOM II

14.00 – 18.00 hrs Ib. Session HAZARDOUS AND INDUSTRIAL WASTE MANAGEMENT

15.45 – 16.15 hrs Break

Moderators: Kasema Čatović, Ph. D. Damir Subašić, Ph. D. Aleksandar Knežević, Mladen Rudež

Ph.D. Aleksandar Knežević, Regional centre for education and information in sustainable development for the South –East Europe (REIC), Concept of operationalisation of waste management in BiH

Ph.D. Damir Subašić and Staša Zovko – Čeramilac, APO doo, Zagreb, Tomislav Lukić, FMEAT, Experience on the projects of rehabilitation of contaminated areas

Renata Pavlina, Fund for the protection of environment and energy efficiency of the Republic of Croatia, Zagreb, Croatia; Activities of the fund for the protection of environment and energy efficiency on the rehabilitation of the hazardous waste

Emil Nanut, Kemis d.o.o., Boštjan Šimenc, Kemis d.o.o., Peter Kovač, Gorenje d.d., Energetika in varstvo okolja, Slovenia, Rehabilitation of the Landfields of gudron

Zoran Matić, Kemis – Termoclean doo, Export of hazardous waste – legal process and operational logistic position

Ivica Grlić Radman, Agroproteinka d.d., Concept of management of animal byproducts in BiH in the line with the EU regulations

Ante Rezić, Velimir Čavar, Jela Lukić, Aluminij dd, Waste management in the Aluminij dd Mostar

mag Vilma Fece, Gorenje d.d., System of integral management with environment in the group Gorenje

Nihad Akeljić, Sisecam Soda Lukavac doo, Influence of the optimisation of the process of production on improvement of the environment

Mladen Rudež, Ph.D. Nevenko Herceg, FMEAT, Sarajevo, Significance of environmental permit and waste management plan in implementation of prevention and control of waste management in BiH

Sanja Grabar, Vesna Šabanović, CIAK doo Zagreb, Setting up of the waste management system within business outfits

Prof. Ph. D. Jovan Sredojević, Mechanical engineering faculty University in Zenica, professional paper, Directions of research for setting up an integral management system – economy of waste

Prof. Ph. D. Aziz Mujezinović, Azra Sivo, Mirnesa Mujkić, ARCELORMITTAL Zenica,

Professional paper, Waste management in the steel industry shown on the example of ArcelorMittal Zenica

Prof. Ph. D. Husnija Resulović, M.Sc. Esad Bukalo, Eng. Damir Behlulović, Antropogenic degradation, urbanization, industrialization and coalmining – causes of damage and soil destruction – prevention and rehabilitation

Drago Mir, Saubermacher Slovenija doo, Hazardous waste – characterization – transportation – storing and supplying
dr. Rok Rotar, Surovina d.d., Integral waste management – shown on the example from vehicle industry

20.00 Dinner in the Hotel Dubrovnik

Friday 12th February year 2010 HOTEL ZENICA

9.30 – 18,00 hrs WORK IN THE SESSIONS

PLENARY CONFERENCE ROOM

9.30 – 13.00 hrs II.a Session ASPECTS OF MUNICIPAL WASTE MANAGEMENT

11.00 – 11.30 hrs Break

Moderators: Ph.D. Viktor Simončič, MSc Mehmed Cero, Danko Fundurulja

Prof. Ph. D. Nevenko Herceg, MSc. Mehmed Cero, FMEAT, Sarajevo, Waste in the State of Environmental Report of Federation BiH“

Ph.D. Čedomir Crnogorac, MSc. Dušica Pešević, PMF/Faculty of natural science and mathematics Banjaluka, Main features of the municipal waste management system in RS“

Renata Pavlina, Fund for the protection of environment and energy efficiency of the Republic of Croatia, Zagreb, Croatia, Municipal waste management system in Republic of Croatia“

Ph.D. Viktor Simončič, Eng. Chem. Ind., VIKOS, Sisak, Croatia, Tomislav Lukić, prof. FMEAT, Sarajevo, BiH,

Optimising of costs of procedures with municipal waste

Ph.D. Damir Barčić, Ph.D. Tomislav Dubravac, Prof. Ph.D. Željko Španjol, Faculty of Forestry of the University in Zagreb, Municipal waste management in the islands of the Adriatic

Mr. Gunnar Linder, Grontmij- Carl Bro, team leader for Sida funded programme for solid waste management in BiH Sweden, Municipal waste management in the municipalities“

Prof. Ph. D. Tarik Kupusović, Hydro-engineering institute of Faculty of Civil engineering Sarajevo, Almir Mulaomerović, KJPK/Utility company RAD, Influence of technology of disposing of municipal waste on the emission of methane and possibility of its use

Ing. Massimo Tomassoni, AnconAmbiente S.p.A., Italy, Initiating services of forced differentiated collection for 100.000 inhabitants (from doors to doors)

Ph.D. Ferdo Bašić, Ph.D. Ivica Kisić, Ph.D. Nevenko Herceg, FMEAT, Aleksandra Jurišić, Krunoslav Sajko: University Zagreb, Faculty of agriculture, Institute for general herbs production, Soil condition as a criterion for appraisal of efficiency of rehabilitation of the landfill of the municipal waste of the town of Nova Gradiška

Ing. Giuseppe Tomasso Sanfilippo, AnconAmbiente S.p.a, Italy, Results achieved in the first years of functioning of the service of the forced differentiated collection for 100.000 inhabitants (from doors to doors)

Danko Fundurulja, IPZ, Zagreb, RH, Tomislav Lukić, FMEAT, Sarajevo BiH, Rehabilitation of the landfills in the Republic of Croatia (until the end of the year 2009)

Mario Zovko, Krešimir Šaravanja, IGH Mostar, Sedimentary powder – measuring of the zero state in the area of the planned landfill

MSc. Emil Šterbenk, ERICO, d.o.o. Celje Slovenija, Planning, education and communication – essentials for successful waste management

Prof. Ph. D. Zoran Milašinović, Civil engineering faculty of the University Sarajevo, Pilot project mechanical – biological processings of waste in the location Vlački – Do in Bosanska Krupa

Davorin Marković, Eng. biology1, Roman Ozimec, MSc. sc., Neven Trenc, MSc. geo., State institute for nature protection, Croatian biospeleological society, Problem of illegal waste disposal in the speleological sites

CONFERENCE ROOM II

9.30 – 13.00 hrs II.b Session ECONOMICAL FINANCIAL ASPECTS OF WASTE MANAGEMENT SYSTEM

11.00 – 11.30 hrs Break

Moderators: prof. Ph. D. Zoran Milašinović, MSc Muris Hodžić, Ph. D. Tomislav Dubravac

Maja Maretić Tiro, Enova d.o.o., Fethi Silajdžić, Enova d.o.o., Emir Zukić, Regional landfill "Moščanica" d.o.o. Zenica, Maja Čolović Daul, Enova d.o.o., Lejla Tabaković, Enova d.o.o., Public private partnership in the sector of waste management in Bosnia and Herzegovina

Joachim Quoden, General Manager PRO EUROPE, Brussels, Belgium, Economical aspects of integrated waste management in Europe focused on the packaging waste

Saša Avirović. GKP Čakom, Čakovec, Structure of the service of the waste handling

Giuseppe Razza, Eptisa, Financing mechanism, available financial resources and Public-Private Partnership to finance the hazardous waste management in BiH

Prof. Ph.D. Nevenko Herceg, Mate Bandur, Muris Hadžić, MSc. Mehmed Cero, Tomislav Lukić, Anto Čović, Amra Krajina, FMEAT, Sarajevo, Model of financing the project Solid waste management in BiH

Maja Čolović Daul, Fethi Silajdžić, Maja Maretić Tiro, Adi Habul, Institucija: Enova d.o.o.,

Rehabilitation of the existing landfill in the municipality of Gračanica

Jochen Trommer, Alba Group Berlin, Germany, Innovative directions in waste handling

13.00 – 14.00 hrs Lunch in The Hotel Zenica

PLENARY CONFERENCE ROOM

14.00 – 18.00 hrs III. Session – ACHIEVEMENTS IN TECHNOLOGIES OF WASTE MANAGEMENT

15.45 – 16.15 hrs Break

Moderators: MSc Emil Šterbenk, Mate Bandur, Ph.D. Aziz Mujezinović

Mr. Willi Stadler, Modern developments in establishing sorting and RDF

Mr. Pierangelo Tondeli, Company SATRIND S.p.a, Italy, Technologies of the processing of the hazardous waste

Andrey Wray, Universal Technical Services, Germany, Advance in technologies of gasification which provides its economical need for safe handling with waste and harmful waste in combination with creating clean energy

Ph.D. Dušan Klinar, Aleksander Dolenc, ZRS BISTRA Ptuj, RADIX Ptuj, Slovenia, New concept of work on landfills in euroregions "ZERO WASTE" – technologies which are upcoming

Irem Silajdžić, Hydro-engineering institute of Faculty of Civil engineering Sarajevo, BiH, Anaerobic digestion: technologies for (bio) waste sustainable management – Example of treatment of waste raw material from the potato processing technology

En. Ivica Budiša, Strabag AG Vienna, Austria, Possibility of processing of hazardous and non hazardous waste shown on the example of the entire operation

Petar M. Gvero, University in Banjaluka, Mechanical engineering faculty, Banja Luka, Mičo Marčeta, EMPES d.o.o., Banja Luka, Vanja Ćurin, DVOKUT PRO, Sarajevo, Slaviša Jelisić, LIR Consulting, Banja Luka, Aleksandra Stanivuković, LIR Consulting, Banja Luka, Benjamin Buzar, DVOKUT PRO, Sarajevo, System for inseneration of animal waste EMPES which uses biomass as a auxiliary fuel

MSc. Miroslav Emling, Eng. Chem., Željko Šmitran, B.Sc. Law, IND-EKO d.o.o. Rijeka, Croatia, Experience in processing of contaminated soil by means of technology of thermal desorption

18.00 hrs Completion of working part of the conference

Saturday 13th February year 2010

9.00 – 13.00 hrs Visit to Regional centre for waste management »Moščanica« in Zenica

PREZENTACIJE NA PLAKATIMA

Antonija Višekruna, Aluminij d.d., Mostar BiH;

Otpadne vode tvornice Aluminija

Nihad Vejzović, Zenica, BiH; Zbrinjavanje otpada na površinskim kopovima

Saša Avirović, GKP Čakom, Čakovec, Hrvatska;

Komunikacija s korisnicima usluga postupanja s otpadom

Saša Avirović, GKP Čakom, Čakovec, Hrvatska;

Funkcioniranje pravilnika i tokova otpada u praksi

Markus Hangartner & Mario Zovko, University of applied sciences of Eastern Switzerland & IGH, Switzerland;

Pasivni mjerači – praktične mogućnosti imisijskih mjerenja

Elvir Ferhatbegović, Gauss, GeoInformacioni sistemi, BiH; Primjena geoinformacionih sistema u upravljanju komunalnim otpadom

Tarik Kupusović, Korajčević Ševala, Agencija za statistiku

BiH, Institut za hidroenergetiku, Sarajevo, BiH; Model proračuna količina građevinskog i ruševnog otpada

Mate Bandur, FMOiT, BiH; Rabljene gume – mogućnosti pravilnog postupanja s ovom vrstom otpada

Azra Bašić, Rajfa Musemić, Adisa Vučina, Federalno ministarstvo okoliša i turizma, Mašinski fakultet Sarajevo,

Mašinski fakultet Mostar, BiH; Smjernice za okolišno prihvatljivo upravljanje otpadnim uljima

TO POSTERS

Antonija Višekruna, Aluminij d.d. Mostar, Professional work, Waste waters of the Aluminij factory“,

Nihad Vejzović, Zenica, BiH, Waste management at surface pits

Saša Avirović, GKP Čakom, Čakovec, Communication with service customers of waste management

Saša Avirović, GKP Čakom, Čakovec, Functioning of rule books and waste flows in practice

Markus Hangartner & Mario Zovko, University of applied sciences of Eastern Switzerland & IGH, Passive measuring equipment – practical possibilities of emission measurements

Elvir Ferhatbegović, Gauss, GeoInformation systems, BiH, Application of geoinformation systems in municipal waste management

Tarik Kupusović, Korajčević Ševala, Agency for za statistics BiH, Hydro-engineering institute, Sarajevo, BiH, Model of calculation of quantities of building and demolition waste

Mate Bandur, FMEAT, Used tires– possibility of correct management of this type of waste

Azra Bašić, Rajfa Musemic, Adisa Vucina, FMEAT, Mechanical engineering faculty Sarajevo, Mechanical engineering faculty Mostar, BiH, Guidelines for environmentally acceptable waste oils management

ORGANIZATOR:

Federalno ministarstvo okoliša i turizma

SUORGANIZATORI:

Vlada Zeničko-dobojskog kantona
Općina Zenica

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POKROVITELJI:

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Svjetska banaka u BiH

Vlada Federacije BiH



