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SPECIFIC TARGETED RESEARCH OR INNOVATION PROJECT

HOLIWAST

Holistic assessment of waste management technologies

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International conference and publication of proceedings

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1. CONFERENCE SUMMARY REPORT

Background

To support dissemination of the HOLIWAST results as well as to encourage interest in the field of holistic analysis of available and emerging technologies for effective municipal waste treatment developed within the HOLIWAST project an international conference was planned (WP7, task 4).

The aims of the conference were to:

- stimulate the dissemination of HOLIWAST results,
- raise awareness of effective implementation of policy instruments for waste management,
- present multidisciplinary assessment of environmental, economic and social aspects of different waste management approaches being developed in the EU,
- promote decision support tool being developed in the HOLIWAST,
- stimulate the utilisation of knowledge in the national and local practice.

Conference record

The International Conference titled: Decision Support for Waste Management in the EU was held on 11-12 June, 2007 at the Auditorium Maximum of Jagiellonian University in Cracow. The conference was organized by Główny Instytut Górnictwa (Central Mining Institute) – GIG with support of HOLIWAST project coordinator - BRGM and partners.

76 conference participants from 16 European countries represented different stakeholders involved in municipal waste management. Present were representatives of national, regional and local administrations, universities and research institutes, waste management companies and journalists.

Conference languages were Polish and English. Simultaneous translation was provided. All participants received conference proceedings including presentations and summaries of posters.

This two-day conference contained three sessions, consisting 17 presentations, a panel discussion and poster session. The results of two-year cooperation of partners in the HOLIWAST project in 10 presentations were discussed and presented. An innovative decision-making tool for multidisciplinary (environmental, economic, social) assessment of different municipal waste management technologies, a common outcome of the HOLIWAST project was demonstrated. Conference participants got opportunities to try out the tool. The conference served as a platform for exchanging view and thoughts on waste management in the EU. To provide the wide spectrum of views besides the HOLIWAST speakers, 5 external speakers from different European countries: Belgium, Austria, Hungary, Latvia and Lithuania presented their contribution towards creation sustainable waste management. During the panel discussion 11 participants representing different stakeholders presented their point of view on crucial issues of municipal waste policy.

The poster session provided an excellent forum for authors to present their research and innovations on the municipal waste management in an informal and interactive

setting. The top two posters, selected based on the voting of the conference participants, were awarded at the plenary session.

During the Holiwast conference took place four short interviews concerning HOLIWAST project and HOLIWAST decision support tool. Interviewers were: Radio Krakow (Radio Cracow), Polska Agencja Prasowa – PAP (Polish Press Agency) and Gazeta Krakowska (Cracow Newspaper). Interviewees were: Alina Rejman-Burzynska – GIG and Andrea Galparoli – Municipality of Turin.

On the first day of the conference, in order to accelerate the networking between the participants, the dinner at the Krzysztofory Palace in Krakow has been organized.

In addition to attending in the conference, participants could take opportunity to visit: Waste Management Facility in Barycz, Cracow and Wieliczka Salt Mine.

Conference announcement

Information materials including conference programme (see Annex 1), call for posters (see Annex 2), registration form and hotel reservation form were prepared in English and Polish version. They were published in internet on HOLIWAST and GIG websites.

The conference was announced on:

- HOLIWAST website: <http://holiwast.brgm.fr/Conference.asp>
- GIG website: http://www.gig.katowice.pl/gig/holiwast_english.php
- <http://www.gig.katowice.pl/gig/holiwast.php>

There was also information about conference on websites of: Virtual Institute BALTIC 21: <http://www.baltic21institute.org/> and <http://www.iiee.lu.se>

The on-line registration was available on GIG website:
<http://www.gig.katowice.pl/gig/holiwast.php>

Report format

This report was designed as a brief summary of the key conference presentations and panel discussion feedback.

Information on the event, including all the presentations is available at <http://holiwast.brgm.fr/Conference.asp> or on request from GIG.

1.1. Day 1: EU Waste Policy and HOLIWAST, Municipal Waste Management in Environmental, Economical and Social Context

Welcome and opening



Jan Wachowicz, Scientific Secretary of Central Mining Institute (GIG) welcomed the participants to the conference highlighting the importance of creation of sustainable waste management in EU.

Michał Luty, Vice President of Katowice City opened the conference on Monday 11, June. Opening the conference, he highlighted the need of creation of

new transparent waste law in Poland as a background for the effective management of municipal waste by the local governments: the City and the Commune.



1.1.1. Session I: Waste Policy and HOLIWAST



The session was chaired by Prof. Jacek Łaczny and co-chaired by Mrs Alina Rejman-Burzynska from Central Mining Institute - GIG, Poland. Each presentation was followed by short discussion on each theme.

EU Waste Policy and supported research programmes

In the key-note presentation Dr Michele Galatola, EC, DG Research – Directorate Environment stressed the rationale Research and Development (R&D) on waste in EU. Dr M. Galatola described scale of waste management problem in EU and the waste hierarchy. He underscored that the previous research was targeted on single improvements of process or products without fully taking into consideration what happens up-stream and down-stream. Currently the lines of action for EU R&D on waste prevention concerns: “zero emission for waste prevention” (vision), integration of various approaches towards sustainability (cleaner technologies, eco-design, industrial ecology), integration of different perspectives (industries, policy-making, technical expertise), action on specific waste flows and training and educational material.



Implementation of EU Waste Policy by local and regional authorities



Dr Francis Radermaker, ARC+, Brussels focused on experience of implementation of EU waste policy on local and regional level in EU countries. He highlighted challenges for local and regional authorities such as: planning and monitoring, specific targets related to European policy, growing municipal waste production and increasing complexity of waste flows. Dr F. Radermaker described waste management practices and performances in various European cities and regions on the basis of data related to disposal rates, recycling achievements of paper, glass, light packaging, organics and others. Diversion of annual municipal waste stream is significant, namely 200-350 kg/person or more, 100-150 kg of dry recyclables /person, 100-200 kg of bio-waste and 50-150 kg of other recyclables. Some good local performers in recycling area have been presented.

Experience of implementation of EU Waste Legislation in Poland



Introducing the subject, Mr Arkadiusz Dzierżanowski, representative of Ministry of Environment, Poland described implementation of EU legislation in Poland and waste policy included in national waste management plan (KPGO 2010). He drew attention to the main strategic objectives and targets in municipal waste management on different levels: national, regional and local. He pointed out the importance of creation of regional systems of municipal waste management and cooperation of communes in the associations. Priorities in investment actions are related to: construction of regional and over-regional waste treatment plants and closure of landfills. It is assumed maximum 250 regional systems of waste management in Poland and 5-15 landfills in voivodship level (till year 2014) with capacity for minimum 15 years. Communes with population below 150 000 people should create associations that equal more than 150 000 inhabitants.

Holistic assessment of waste management technologies

The last presentation of this session introduced the HOLIWAST project developed within the EU 6th Framework Program for Research, Technology Development and



Demonstration by consortium of partners from 7 countries (France, Germany, Denmark, Sweden, Austria, Italy and Poland) in the period of 2 years. Dr Jacques Villeneuve, BRGM, France coordinator of HOLIWAST project described overall scientific objectives: a multidisciplinary comparison of different waste management technologies, three case studies showing how to identify the most appropriate technologies within an integrated waste management system for different socio-economic contexts, as well as an evaluation of these technologies and support decision-makers in waste management. The project successfully developed innovative decision-making tool for multidisciplinary (environmental, economic, social) assessment of different municipal waste management technologies. J. Villeneuve announced the presentations of results of all workpackages included in the project during two days of conference. The main products of the HOLIWAST: deliverables and decision support tool are available respectively at: <http://holiwast.brgm.fr> and <http://www.lca-net.com/holiwast>.

Main points of discussion

The discussion in this session was focused on three main issues:

- Reduction of CO₂ from waste management: Achieving the landfill directive's target will result in a net reduction of about 250 kg CO₂/tonne of waste. Further reduction to about 490 kg CO₂/tonne could be achieved by implementation of advanced technologies. There is a need for assessment of waste treatment technologies with respect to emission of CO₂ and research on "zero CO₂ emission".
- Transposition of EU legislation in Poland and difficulties in implementation of new waste regulation in practice: In existing regulation the role of local government in the management of municipal waste in commune is not clearly defined. It is expected that this situation will change when the new regulation being in preparatory process enter into force.
- Performance of waste management system in different countries of EU: The overall picture of waste management showed that some local and regional authorities succeeded in achievements of high rates of recycling (paper, glass, packaging, organic and others). It is important to disseminate their experience to other countries.



1.1.2. Session II: Municipal waste management in environmental, economical and social context – case studies

The first part of this session intended to provide a view on different aspects of the current situation and planned development of waste management in various European countries.



The session has been chaired by Prof. Thomas Lindqvist from IIIIEE Lund University, Sweden.

Elaboration and implementation of the Regional Waste Management Plans in Latvia



Dr Ruta Bendere representing Waste Management Association of Latvia described implementation of the EU policy and regional waste management plans in Latvia. In Latvia where the municipal waste management based on landfilling (77% of waste is landfilled) to meet requirements of EU waste legislation is difficult and needs a lot of investments. R. Bendere stressed the

results of changes in the last 5 years: reduction of illegal and small landfills as well as development of separate collection and recycling. She drew attention to plans of development of waste management system and investment projects.

Target analysis of the Waste Management of the Moravian-Silesian Region for Self-Government, its economical and social problems

Unfortunately speakers from Czech Republic were absent, but the presentation regarding the regional case study of Moravian-Silesian Region in Czech Republic was included in the conference proceedings.

Current situation and future trend of solid waste management in Hungary



Present and future of municipal waste management in Hungary was presented by Mr Zsolt Istvan, BAY-LOGI, Hungary. He stated that legislation background is fully harmonised with EU laws. He discussed current problems of waste management being based in 85% on landfilling. It is still a need to solve the problems of illegal waste landfills and reclamation of old landfills. Mr Z. Istvan presented results of the last five-year changes in waste management such as: reduction of illegal and small

landfills (from 3000 landfills in 2000 to 150 landfills now) and development of separate collection and recycling. Within ISPA 12 projects the new regional waste management system is currently developed. Within Cohesion Fund five new projects will start after 2007. Introducing future development of waste management in Hungary, Mr Z. Istvan discussed future trends in MSW treatment processes.

HOLIWAST case studies of waste management systems of: large city, medium size city and rural area (Turin, Katowice, Tollose):

The next three presentations were aimed to introduce audience to HOLIWAST case studies and provide the background information about three selected contrasted systems in Europe: large city – Turin in Italy, medium size city – Katowice in Poland and rural area – Tollose in Denmark. Speakers: Mrs Valentina Caimi (in behalf of Dr Enzo Favoino), SAPM, Italy, Mrs Alina Rejman-Burzynska, GIG, Poland and Ingo Braeuer, Ecologic, Germany, described respectively current state of the municipal waste management systems in: Turin, Katowice, Tollose. In the presentations, all the speakers stressed the rationale for optimisation of waste management systems and key issues for modelling case studies.



Preliminary analysis of waste management systems – a simulation approach with AWAST

After a short description of concept of AWAST simulation tool, input/output data and models of operations, Dr J. Villeneuve discussed the results of carried out simulations of



waste management systems for the case studies (Turin, Katowice and Tollose). using AWAST. These results included a coherent matter balance, energy balance and costs for current state and BAT scenario. He concluded that the waste management in Europe is a good evidence of diversity. AWAST simulation approach reflects the complexity of local situations, accounts for local data, completes the missing data with default values, provides the main figures on material balance, energy balance and costs but remains limitations related to technical aspects.

Future approaches for MSW Management in Europe

Dr Martin Steiner, TBU, Austria discussed the past, current and future approaches for MSW management in Europe. Driving forces for MASW treatment are: utilization of single waste components, minimization of amounts to be landfilled and stabilization of residuals to be landfilled. Principles of modern waste management in any European countries are: Avoidance – Recycling – Treatment. Nowadays the important driver is EU Landfill Directive establishing targets for reduction of amount of landfilled biodegradable waste. Every single EU member state is free with which instruments the targets are to be reached. It can be reached by means of diversion (separate collection of paper and biowaste) and by means of treatment (stabilization by biological and /or thermal methods). The member states are free to set stricter targets. For example, in Austria, since January 1, 2004 it is forbidden to dispose untreated municipal solid waste on any landfill. Exceeding the targets is not accounted for. The targets are generally valid on a state wide level. Non-compliance with these targets leads to sanctions in the end.



Current and emerging waste treatment technologies for biowaste and residual waste

The subject was introduced by Dr Martin Steiner, TBU, Austria (on behalf of Dr Enzo Favoino). He presented the results of WP2 of the HOLIWAST project: extensive survey of current and emerging technologies: composting, anaerobic digestion, conventional thermal treatment (grate incineration, fluidised bed incineration) and non-conventional thermal treatments (gasification and pyrolysis) with assessment of possibilities and conditions for integration into combined treatment strategies. Cost structures and drivers of each technology have been analysed. M. Steiner described the current status of MBT in Europe and perspective of development of MBT systems. He discussed advantages of MBT systems compared to thermal treatment –incineration: convenient cost, flexibility, possibility of combination with RDF production and usually higher public acceptance.

Stakeholder-based impact assessment for the selected case studies

The last presentation of this session was related to social aspects of municipal waste management, namely stakeholder-based impact assessment developed within HOLIWAST project by Ecologic, Germany. The objectives of the stakeholder-based impact assessment are: identification of possible conflicts linked with implementation of “best option”(BAT scenario) which results from the technical impact assessment and assessment of the “best option” from political point of view. Conflicts involve citizens/users, politicians, decision makers, waste management services and researchers. Dr Ingo Braeuer presented identified conflicts, the results of interviews conducted in three case studies: Turin, Katowice and Tollose. Interviewees were: policy maker, representative of the local waste management service and environmental NGO. Stakeholder-based impact assessment can help to alleviate conflicts between stakeholders and to serve as an information tool for the set-up of an implementation strategy.



Major points of discussion

The discussion in this session was focused on the following problems:

- The achievement of EU targets for reduction of amount of landfilled biodegradable waste: It seems that new member states (Latvia, Hungary) established too ambition targets. The existing waste management systems are still based on landfilling. The time schedule for achievement of these targets is tight. Participants were interested in the sanctions that will be imposed in practice on countries if they don't comply the EU targets.
- Some detailed information related to HOLIWAST case studies, especially concerning efficiency of separate collection, recycling and costs.



1.1.3. Poster Session

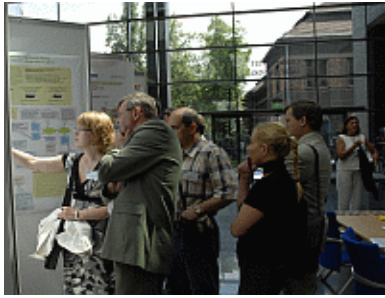
In addition to session presentations, the conference participants could view posters during two days. There were presented 10 posters concerning various interesting problems of waste management.

Poster session provided for authors and participants an opportunity to meet each other and to have discussion about presented issues. The poster session was an excellent forum for authors to present their research and innovations on the municipal waste management in an informal and interactive setting.

List of posters

No	Title	Authors
1	Simulation of Scenarios for a Waste Management Operator: SYCTOM of Paris Agglomeration	P. Michel, Y. Menard, J. Villeneuve - BRGM, D. Fournet, C. Lafon - SYCTOM France
2	The design of municipal waste management model for EU countries	Iwona Kuczyńska, Małgorzata Pawul, Radosław Pomykała AGH University of Science and Technology, Faculty of Mining and Geoengineering Marek Branicki, Marzanna Janik, Justyna Senderek, Municipality of Krakow, Poland
3	STAN – Free Software for Substance Flow Analysis	Roland Fehringner, TUV, Vienna, Austria
4	Koncepcja wspomagania decyzji w gospodarce odpadami komunalnymi w gminie Concept of decision support tool for municipal waste management in commune	Ewa Owczarek-Nowak Silesia Voivodship Marshal Office, Poland
5	Environmental and economical aspects of regional municipal waste management system, Lithuania Case	Jurate Miliute Institute of Environmental Engineering Kaunas University of Technology, Lithuania
6	Comparative environmental assessment of incineration and landfilling of municipal solid waste	Izabela Kosińska Warsaw University of Technology, Faculty of Environmental Technology, Poland
7	Goal oriented evaluation method for assessment of plastic waste management, Case studies: Austria and Poland	Renata Bogucka i Paul Brunner TUW, Vienna, Poznan University of Economics Austria and Poland
8	Priorities in Polymer Waste Management in Republic of Macedonia	Slobodanka Koseva University of Svietyj Kiril I Metodij, Faculty of Technology and Metallurgy, Macedonia
9	Developing Waste Management System for Packaging Waste, WEEE and ELV in Estonia	Anti Roose, Jaan Kers Institute of Technology, University of Taru, Material Sciences, Tallinn University of Technology, Estonia
10	Sources Paths and Sinks of Heavy Metals in the City of Villach	Roland Fehringner, TUV, Vienna, Austria
11*	Are Today's Stocks, Our Resources of Tomorrow	Hans Daxbeck, RMA, Austria
12*	Contribution of the Waste Management to Copper Metabolism of Austria	Hans Daxbeck, RMA, Austria

* Posters submitted only electronically but not exhibited during poster sessions



At the end of the first day of the conference participants had a common dinner at the Krzysztofory Palace in Cracow.



1.2. Day 2: Decision Support for Municipal Waste Management

1.2.1. Session III: Waste Policy and HOLIWAST



The session was chaired by Dr Talib Mahdi from Cardiff University, United Kingdom.

Application of policy instruments in waste management

Dr Naoko Tojo from IIIEE Lund University, Sweden presented the studies on different policy instruments: administrative (standards, targets), economic (taxes, refunds) and informative (eco-labelling, information companies). The studies looked at instruments considered: content, objectives (waste hierarchy), addresses, environmental effectiveness, potential introduction at the local level, frequency of application and political applicability. Various instruments are addressed different parts of waste hierarchy. N. Tojo provided examples of the respective types of instruments as well as stages of waste hierarchy that the respective instruments aim to influence. N. Tojo discussed relevance of all above mentioned instruments to local governments. She stressed limited possibilities of introducing instruments addressed waste prevention at local level but potential to address waste prevention via informative instruments/procurement policies. Various local opportunities for enhancing source separation and enforcement for standards have been identified. She concluded that there is limitation in comparison and isolation of effectiveness, due to: differences in objectives and addresses, multiple instruments and influencing factors, limited implementation period, different cultural and demographic context as well as differences in the quality of studies.



Assessment of environmental efficiency by applying CBA and mCEA on the case studies

In his presentation Dr Roland Fehringer, Vienna University of Technology focused on an assessment of environmental efficiency developed within WP4 of HOLIWAST project. In result of research, two methods: life-cycle based Cost-Benefits Analysis -



CBA and modified Cost-Effectiveness-Analysis – mCEA, were selected and applied to the three case studies (Turin, Katowice and Tollose). Dr R. Fehringer described main steps performed within both methods (CBA and mCEA). For CBA he stressed an allocation problem, setting of system boundary and distribution of costs: private costs (investment, operating, others) and costs of emissions as well as benefits of internal and external effects. He discussed the results of calculations for Katowice for status quo (SQ) scenario and BAT scenario, cost/benefits ratios and comparison of CBA results for the

three case studies. Presenting mCEA he pointed out: development of total effectiveness value, levels of hierarchy and weighting of goals. The results of calculations, total effectiveness value-cost ratio were discussed on example of scenarios (SQ and BAT) for Tollose.

HOLIWAST decision support tool



Dr Bo Weidema, 2-0 LCA Consultants, Denmark briefly presented the general principles of the HOLIWAST decision support tool (DST). The tool allows compare up to five stakeholder views or scenarios of municipal waste management policies. For each scenario or stakeholder, it is possible to model different waste compositions, policy instruments, constraints and acceptable technologies. Results are presented in terms of differences between scenarios or stakeholders and in terms of environmental

impacts and economic costs. B. Weidema highlighted: web-application, providing a basis for a fact-based dialogue among stakeholders, user input (local data and chosen policy instruments), pre-definition of technologies and impacts per technology and providing of default data for all inputs. He underscored, that the tool is very flexible and easy to use, no modelling skills are necessary. This tool can be used as a discussion tool, since focuses on stakeholder perspectives (choice of different optimisation criteria, constraints and policy instruments).

After the presentation, the participants had an opportunity to take part in demonstration of the HOLIWAST decision support tool in the conference hall. Demonstration of tool was carried out by Dr Bo Weidema, Dr Jacques Villeneuve and Dr Ingo Braeuer.



Information tool EUWAS - European Waste Sector Assistant



A presentation by Prof. Jurgis Staniskis, Institute of Environmental Engineering (APINI), Kaunas University of Technology, Lithuania introduced the information tool EUWAS, European portal for waste management. He stressed that EUWAS represents an intelligent collection of data and information sources combined with practical knowledge. EUWAS provides information related to:

waste management services, suppliers and cooperation, tender information, best practice and BAT, logistic services, EU law, projects, funding and financing as well as information about available training courses. At the end J. Staniskis invited participants to use EUWAS.

Major points of discussion

The discussion in this session was focused on two main issues:

- Applicability and transferability of instruments in various cultural, socio-economic contexts: There is no one-size fit-all panacea. However, one can learn from the experiences of others and see how different challenges have been overcome.
- Factors hindering the development of source separation and recycling: The situation in Katowice was given as an example. The fact that the revenue of private waste companies is based on the amount of residual waste collected and that they are not allowed to charge separately collected waste make it difficult for the companies to strive for source separation. The situation gets worse when clean fractions of the recyclables separately collected are scavenged by informal sectors.



- Importance of assumptions in calculations done for assessment of environmental efficiency by applying methods CBA and mCEA: Assumptions and their influence on the results of calculations depend on the considered system and methods used (CBA and mCEA). For example, for the CBA calculation the discount rate is very important. For mCEA calculations the weighting is crucial. It is necessary to know the uncertainty of the input data and to make a sensitivity analysis of the evaluation results. The results verified by two different goal oriented evaluation methods are more relevant for decision making than those obtained by classical LCA methodology using a standard set of criteria.

Panel discussion

The panel discussion was facilitated by Professor Paul Brunner, Vienna University of Technology, Austria



Professor P. Brunner started the discussion from two questions:

1. What is the main problem in municipal waste management?
2. How HOLIWAST Decision Support Tool can help in solving this problem?

In discussion took part eleven panellists representing different stakeholders:

1. Jerzy Kopyczok, Municipality of Siemianowice, Poland
2. Krystyna Szpadt, SITA Polska, Poland
3. Ryszard Szpadt, University of Technology, Wrocław, Poland
4. Iwona Kuczyńska, AGH University of Science and Technology, Poland
5. Arkadiusz Dzierżanowski, Ministry of Environment, Poland
6. Michale Galatola, European Commission, DG Research, Belgium
7. Włodzimierz Sokoł, Voivodship Fund of Environmental Protection and Water Management, Poland
8. Urszula Machlarz, Marshal Office of Silesian Voivodship, Poland
9. Jerzy Starypan, BESKID, Poland
10. Jacques Villeneuve, BRGM, France
11. Tadeusz Duda, MPGK Katowice, Poland

Discussion focused on particular problems related to waste policy and decision-making process in Poland. They well reflected the similar issues of waste management in other new member states - Central and East European countries.

Some of the main points made by panellists in the discussion were:

- National regulations are important policy instruments for development of the waste management. Nowadays, the elaboration and implementation of waste law is a very dynamic process. Growing number of regulations requires coordination and integration in preparatory process. The frequent changes in Polish law caused uncertainty of waste management companies regarding their future market of waste. In consequence it stops the decision-making process and investments. Therefore, it is observed rather slow progress in implementing of advanced technologies of waste treatment in practice.
- New EU waste legislation is aimed at strengthening of policy instruments for supporting development of waste management. There is need to introduce these instruments in national law. In the case of Poland this process is very complex and cumbersome. Lack of such instruments hampered the waste management.
- Accessibility of financial resources for investment of the waste treatment facility is a crucial issue. Representative of Marshall Office of Silesian Voivodship stated that the budget allocated for development of municipal solid waste management in Regional Operational Programme, is much lower than real needs. From other side, the representative of Voivodship Fund of Environmental Protection and Water Management stressed that they faced lack of well prepared project proposals submitted for funding and the resources allocated for that purpose are not utilized.
- In decision-making process, a siting of waste treatment facility is also crucial problem. The public acceptance is as important to success as performing good technical solution. We are still facing the BANANA syndrome (build absolutely nothing, anywhere near anything). Effective public information and public involvement actions should accompany any waste management planning.
- Waste management policy is an environmental policy and does not appear to be a priority for political decision makers who are much more concerned by economic affairs. The main problem is that the cost of environment is high and is presently reported to the next generation. It would be urgent to internalize these environmental costs in the waste sector activities so that the priorities could be changed and next generations preserved, as well in their welfare as in their money.
- The tools for multidisciplinary assessment of different municipal technologies and impact of policy instruments such as HOLIWAST Decision Support Tool can be very helpful in decision-making process at local and/or regional level. Unfortunately, the application of these tools is still not in common use by local decision makers. It is necessary to introduce to educational program at the university level, training courses for students, in area of application of newly developed tools in waste management planning. it will allow to promote and disseminate these tools more efficiently.

Closing conference

In his closing statement, Prof. Paul Brunner noted that these two days of conference were an intensive overview and discussion on outcomes of HOLIWAST project.

On the behalf of the participants, he thanked Mrs Alina Rejman-Burzyńska representing conference organizer GIG for her hospitality and a good organization of this conference.

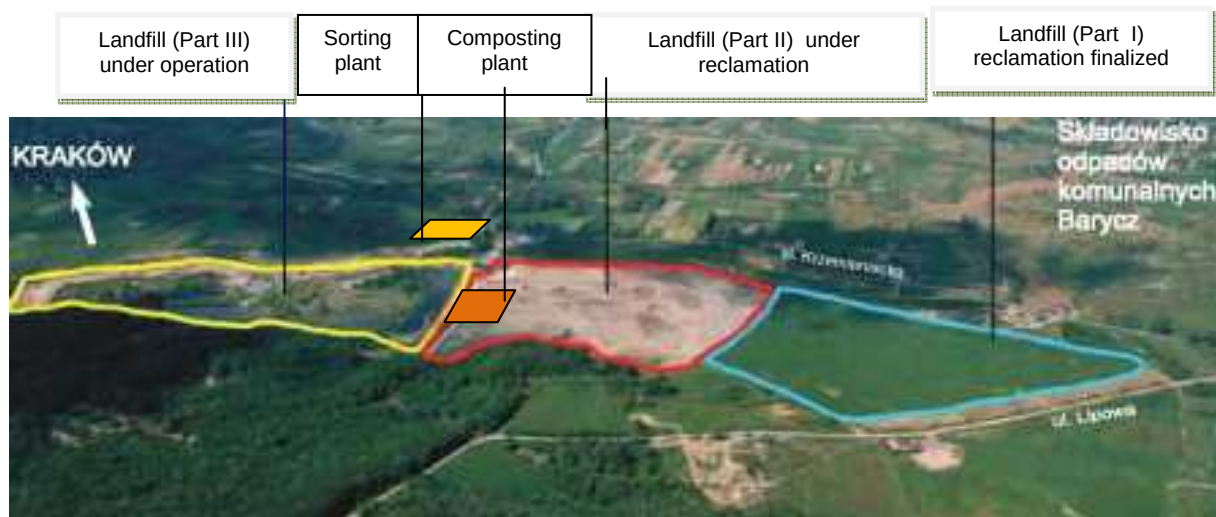
Mrs Alina Rejman-Burzyńska thanked all the participants and, particularly, the speakers of HOLIWAST project and invited external speakers for their participation and contribution in common discussion during the conference days. She thanked hard working translators and all her colleagues from GIG working on organization of this event. She asked all participants for dissemination of the outcome of this conference in their local circumstances and called for contribution in the creation of sustainable waste management system accepted by all stakeholders.



1.2.2. Technical tour to BARYCZ

During the conference the participants visited the Barycz Municipal Waste Treatment Facilities including: the BARYCZ landfill, composting plant, sorting plant and plant for utilization of landfill gas, cover area of 36 ha. The Barycz landfill and other plants are operated by the waste management company MPO Krakow since 1974.

The Barycz Landfill receives municipal solid waste from two cities: Cracow and Wieliczka as well as neighboring communes. On the landfill site, waste is treated using special equipment, such as compactors, bulldozers, heavy-duty dumpers, sewage trucks. The expansion of landfill is based on construction of new quarter (Part III) designed for 2 milion cum of waste (11 ha).



Composting plant includes 16 KNEER compost containers with total year capacity amounts 6000 tonnes of green waste (the plant is equipped with 2 bio-filters). Landfill gas capturing systems is equipped with electricity generation system (875 kW). In the sorting plant (capacity 20 000 tonnes per year) the waste from separate collection is sorted to recover waste paper divided into carton, cardboard, illustrated magazines and newspapers; glass divided into white and colored glass, plastics divided into colored and uncolored PET bottles, PEHD packaging and foils.

Some of pictures illustrating the technical trip are present below.



Participants have been interested in technical details of Barycz facilities as well as in status of complying with EU regulations. Facilities have been constructed most recently within framework of EU ISPA and Cohesion Funds Projects. The manager of BARYCZ confirmed that these new facilities result complying of Barycz with EU waste management legislation. The most recent studies elaborated by experts indicate, that in order to comply fully with these regulations additional investments are necessary. The process of planning has already started by MPO and Cracow Municipality.

1.2.3. Tour to Wieliczka Salt Mine

The participants visited the Salt Mine Wieliczka, the oldest salt enterprise on Polish land dating back to the Middle Ages.

Several hundreds of years of rock salt exploitation have shaped the spatial arrangement of its excavated structure. Lying on nine levels, concealed under the town, the mine reaches down to the depth of 327 metres. Subterranean Wieliczka consists of nearly 300 kilometres of corridors and almost 3,000 chambers. The tourist route accessible to visitors includes a 3.5-kilometres section located from 64 to 135 metres below ground level.

The participants could see magnificent chapels, captivating underground lakes, original tools and equipment, traces of mining works. The Wieliczka miners have left behind many salt carvings and murals.



In 1976 the Wieliczka Salt Mine was entered in the National Monuments Registry. Two years later, in 1978, the mine was inscribed in UNESCO's First World List of Cultural and Natural Heritage, and in 1994 it was acknowledged as the National History Monument by the president of Poland.

At present, the underground tourist route is visited annually by over 1,000,000 tourists.

2. CONFERENCE PROGRAMME

Monday, June 11, 2007

- 8.30 Registration – Auditorium Maximum, Krupnicza Street, Krakow
- 9.30 Welcome – Jan Wachowicz, Scientific Secretary of Central Mining Institute (GIG), Poland
- Opening of conference – Michał Luty, Vice-President of the Katowice City, Poland

Session I:

Waste Policy and HOLIWAST

Chairman: Jacek Łączny, GIG, Poland

- 9.40 EU Waste Policy and supported research programmes – Michele Galatola, European Commission, DG Research, Brussels, Belgium
- 10.00 Implementation of EU Waste Policy by local and regional authorities – Francis Radermaker, ACR, Belgium
- 10.20 Experience of implementation of EU Waste Legislation in Poland – Arkadiusz Dzierżanowski, Ministry of Environment of Poland
- 10.40 Coffee break
- 11.00 Holistic assessment of waste management technologies - HOLIWAST project – Jacques Villeneuve, BRGM, France – Coordinator

Session II:

Municipal Waste Management in environmental, economical and social context - case studies

Chairman: Thomas Lindqvist, Lund University IIIIEE, Sweden

- 11.20 Elaboration and implementation of the Regional Waste Management Plans in Latvia – Ruta Bendere, LASA, Latvia

- 11.45 Target analysis of the Waste Management of the Moravian-Silesian Region for Self-Government, its economical and social problems; Pavel Santarius, UDMS; Radim Kovarik, FITE a.s., Czech Republic
- 12.10 Current situation and future trend of solid waste management in Hungary – Zsolt Istvan, Peter Chrabak, BAY-LOGI, Hungary
- 12.35 HOLIWAST case studies of waste management systems of: large city , medium size city and rural area (Turin, Katowice, Tollose): Case study: Turin – Enzo Favoino, SAPM, Italy
- 13.00 Lunch

14.00 – 15.00 Poster Session - Hall

- 14.30 Case study: Katowice - Alina Rejman-Burzyńska, Eugeniusz Jędrysik, GIG, Poland
- Case study: Tollose, Ingo Braeuer, Ecologic, Germany, Naoko Tojo, IIIEE – Lund University, Sweden
- 15.00 Preliminary analysis of waste management systems – a simulation approach with AWAST – Jacques Villeneuve, Pascal Michele, Yannick Menard, BRGM, France
- 15.30 Current and emerging waste treatment technologies of biowaste and residual waste – Enzo Favoino, Marco Ricci, SAPM, Italy
- 16.00 Coffee break
- 16.20 Future approaches for MSW Management in Europe – Martin Steiner, TBU, Austria
- 16.50 Stakeholder-based impact assessment - Ingo Braeuer, Alexander Neubauer, Ecologic, Germany
- 17.20 Summary of the first conference day and closing
- 19.30 Dinner in the Krzysztofory Palace, the Main Market Square 35, Fontana's Hall (I Floor)

Thursday, June 12, 2007

Session III:

Decision support for municipal waste management

Chairman: Talib Mahdi, Cardiff University, UK

- 9.30 Application of policy instruments in waste management – Naoko Tojo, IIIEE – Lund University, Sweden
- 10.00 Assessment of environmental efficiency by applying CBA and CEA on the case studies – Roland Fehringer, Vienna University of Technology, Austria
- 10.30 HOLIWAST decision support tool - Bo Weidema, 2.0 LCA Consultants, Denmark
- 11.00 Coffee Break

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| 11.00-12.30 | Demonstration of HOLIWAST tools – BRGM, 2.0 LCA Consultants - Hall |
| 11.00-12.30 | Poster Session - Hall |

- 12.00 Information tool EUWAS - European Waste Sector Assistant – Jurgis Staniszkiš, APINI, Lithuania
- 12.30 Panel discussion and summary of the conference - *Chairman: Paul Brunner, Vienna University of Technology, Austria*
- 13.20 Closing of conference
- 13.30 Lunch

Conference Tours:

7.15 - 9.30 Tour 1: Technical tour to Waste Treatment Facility, Barycz, Cracow

15.00 - 19.30 Tour 2: Visiting of the Wieliczka Salt Mine - UNESCO First World List of Cultural and Natural Heritage

Departure of both tours in June 12 in front of Auditorium Maximum :

Tour 1 - Barycz - 7.15 a.m

Tour 2 - Wieliczka – 3.00 p.m.

3. LIST OF PARTICIPANTS

No	Country	First name	Surname	Company
1.	AUSTRIA	Paul H.	Brunner	Vienna University of Technology
2.		Renata	Bogucka	Vienna University of Technology
3.		Roland	Fehringer	Vienna University of Technology
4.		Martin	Steiner	TBU GmbH
5.	BELARUS	Siarhei	Darozhka	Belarusan National Technical University
6.		Vladimir	Savich	Belarusan National Technical University
7.	BELGIUM	Michele	Galatola	European Commission – DG Research
8.		Francis	Radermaker	ACR+, Brussels
9.	DENMARK	Bo	Weidema	2.-0 LCA Consultants
10.	FRANCE	Jacques	Villeneuve	BRGM
11.		Michel	Pascal	BRGM
12.	ESTONIA	Jaan	Kers	Tallinn University of Technology
13.		Harri	Moora	SEI-Tallinn
14.		Antti	Roose	University of Tartu
15.	GERMANY	Ingo	Bräuer	Ecologic
16.	HUNGARY	Istvan	Zsolt	Buy Zoltan Foundation, Institute of Logistics
17.	ITALY	Valentina	Caimi	Scuola Agraria del Parco di Monza
18.		Andrea	Galparoli	AMIAT
19.	LATVIA	Ruta	Bendere	Waste Management Association of Latvia
20.	LITHUANIA	Jurate	Miliute	Institute of Environmental Engineering, Kaunas University of Technology
21.		Jurgis	Staniskis	Institute of Environmental Engineering, Kaunas University of Technology

22.	MACEDONIA	Maja	Cvetkovska	Faculty of Technology and Metallurgy
23.		Slobodanka	Koseva	Faculty of Technology and Metallurgy
24.	SLOVAK REPUBLIC	Blanka	Kapustová	Slovak Environmental Agency
25.	SWEDEN	Thomas	Lindhqvist	International Institute for Industrial Environmental Economics (IIIEE), Lund University
26.		Andrius	Plepys	IIIEE, Lund University
27.		Naoko	Tojo	IIIEE, Lund University
28.	UK	Talib	Mahdi	GRC, Cardiff University
29.	POLAND	Agnieszka	Bartyzel	Urząd Miasta Jaworzna
30.		Barbara	Bialecka	Główny Instytut Górnictwa (GIG)
31.		Bronisława	Czechelska-Paliga	Urząd Miasta Jaworzna
32.		Anna	Dobrzelecka	Urząd Miasta Gorzów
33.		Renata	Drzażdżyńska	ABRYS
34.		Arkadiusz	Dzierżanowski	Ministerstwo Środowiska Warszawa
35.		Tadeusz	Duda	MPGK Katowice
36.		Andrzej	Fryźlewicz	Urząd Miasta Zakopane
37.		Teresa	Golba	Urząd Miasta Knurów
38.		Jacek	Grabowski	Główny Instytut Górnictwa (GIG)
39.		Mirosław	Herman	WGK Urząd Miasta Katowice
40.		Jolanta	Patyk	Urząd Miejski w Chrzanowie
41.		Marta	Machnicka-Hławiczka	Główny Instytut Górnictwa (GIG)
42.		Aleksandra	Mazur	Urząd Miasta Zakopane
43.		Eugeniusz	Jędrysik	Główny Instytut Górnictwa (GIG)
44.		Anna	Kapturkiewicz	Urząd Miejski w Chrzanowie
45.		Anna	Kicińska	Ministerstwo Środowiska
46.		Jerzy	Kopyczok	Urząd Miasta Siemianowice
47.		Izabela	Kosińska	Politechnika Warszawska
48.		Barbara	Kostrzewska	ABRYS
49.		Bogdan	Kozieł	Śląski Związek Gmin i Powiatów

50.		Jan	Książek	Starostwo Powiatowe w Olkuszu
51.		Iwona	Kuczyńska	AGH University of Science and Technology
52.		Joanna	Kulczycka	Instytut Gospodarki Surowcami Mineralnymi i Energią
53.		Leszek	Kurek	Urząd Miasta Poznania
54.		Jolanta	Latosińska	Politechnika Świętokrzyska
55.		Maciej	Lorek	Urząd Miasta Gdańska
56.		Michał	Luty	Urząd Miasta Katowice
57.		Marian	Łączny	Główny Instytut Górnictwa (GIG)
58.		Urszula	Machlarz	Urząd Marszałkowski w Katowicach
59.		Dawid	Madej	Politechnika Śląska Katowice
60.		Andrzej	Malara	MPGK Katowice
61.		Ernest	Marcinkowski	Politechnika Krakowska Wydział Ochrony Środowiska
62.		Aleksandra	Marecka	AGH University of Science and Technology
63.		Cecylia	Jurczak	Urząd Miasta Krakowa
64.		Ewa	Owczarek-Nowak	Urząd Marszałkowski woj. Śląskiego
65.		Tadeusz	Pająk	AGH University of Science and Technology
66.		Alina	Rejman-Burzyńska	Główny Instytut Górnictwa Katowice
67.		Bogumił	Sobuś	UM Częstochowy
68.		Włodzimierz	Sokół	WFOŚiGW Katowice
69.		Grażyna	Stanuch	Urząd Miasta Krakow
70.		Jerzy	Starypan	BESKID
71.		Dariusz	Sylwestrzak	Zakład Utylizacji Sp. z o.o. Gdańsk
72.		Krystyna	Szpadt	SITA POLSKA
73.		Ryszard	Szpadt	Politechnika Wroclawska
74.		Ryszard	Piskorski	ZGOK Olsztyn
75.		Jan	Wachowicz	Główny Instytut Górnictwa (GIG)
76.		Patrycja	Zadrużna	Urząd Miasta Siemianowice

The Conference Secretariat: Lucyna SZOŁTYSEK (GIG), Sylwia JAROSŁAWSKA-SOBÓR (GIG)

Interpreters: Witold GÓRECKI, Jerzy WRÓBLEWSKI

Annex 1.



International Conference

Decision Support for Waste Management in the EU

June 11 – 12, 2007, Cracow, Poland



Background

- o We would like to invite you cordially to take part in the international conference “Decision Support for Waste Management in the EU” which will be held on 11-12 June, 2007 at the Auditorium Maximum of Jagiellonian University in Krakow.
- o Within the EU 6th Framework Program for Research, Technology Development and Demonstration, the project “Holistic Assessment of Waste Management Technologies - HOLIWAST successfully developed holistic analysis of available and emerging technologies for effective municipal waste treatment and evaluation of policy instruments for promoting these technologies. Innovative decision-making tool to multidisciplinary (environmental, economic, social) assessment of different municipal waste management technologies, the result of 2 years cooperation of partners from 7 countries (France, Germany, Denmark, Sweden, Austria, Italy and Poland) in the HOLIWAST project will be presented during the conference.
- o We expect the conference to become a common forum aiming to promoting tools for assessment waste treatment technologies in a wide context and inspire conference participants to find and implement effective technological solutions for creation of sustainable municipal waste management at local and regional level.

Organisation: Central Mining Institute (GIG), Katowice, Poland with support of HOLIWAST project coordinator BRGM (France) and partners.

Conference is funded by the European Commission Directorate General for Research.



HOLIWAST website: <http://holiwast.brgm.fr>

Conference Programme

Monday, June 11, 2007

- 8.30 Registration – Auditorium Maximum, Krupnicza Street, Krakow
- 9.30 Welcome – Jan Wachowicz, Scientific Secretary of Central Mining Institute (GIG), Poland
- Opening of conference – Michał Luty, Vice-President of the Katowice City, Poland

Session I:

Waste Policy and HOLIWAST

Chairman: Jacek Łączny, GIG, Poland

- 9.40 EU Waste Policy and supported research programmes – Michel Galatola, European Commission, DG Research, Brussels, Belgium
- 10.00 Implementation of EU Waste Policy by local and regional authorities – Francis Radermaker, ACR, Belgium
- 10.20 Experience of implementation of EU Waste Legislation in Poland – Beata Kłopotek, Ministry of Environment of Poland
- 10.40 Coffee break
- 11.00 Holistic assessment of waste management technologies - HOLIWAST project – Jacques Villeneuve, BRGM, France – Coordinator

Session II:

Municipal Waste Management in environmental, economical and social context - case studies

Chairman: Thomas Lindqvist, Lund University IIIIEE, Sweden

- 11.20 Elaboration and implementation of the Regional Waste Management Plans in Latvia – Ruta Bendere, LU, Latvia
- 11.45 Target analysis of the Waste Management of the Moravian-Silesian Region for Self-Government, its economical and social problems; Pavel Santarius, UDMS; Radim Kovarik, FITE a.s., Czech Republic
- 12.10 Current situation and future trend of solid waste management in Hungary – Zsolt Istvan, Peter Chrabak, BAY-LOGI, Hungary
- 12.35 Municipal waste management in Krakow – Henryk Kultys, MPO-Krakow, Poland
- 13.00 Lunch

14.00 – 15.00 Poster Session - Hall

- 14.30 HOLIWAST case studies - waste management system of large city, medium size city and of rural area (Torino, Katowice, Tollose) – Enzo Favoino, SAPM, Italy; Alina Rejman-Burzyńska, GIG, Poland; Bo Weidema, 2.0 LCA, Denmark,
- 15.00 Preliminary analysis of waste management systems – a simulation approach with AWAST – Jacques Villeneuve, Pascal Michele, Yannick Menard
- 15.30 Analysis of current and emerging waste treatment technologies of biowaste and residual waste – Enzo Favoino, Marco Ricci, SAPM, Italy
- 16.00 Coffee break
- 16.20 Future approaches for MSW Management in Europe – Martin Steiner, TBU, Austria

- 16.50 Stakeholder-based impact assessment for the selected case studies - Ingo Braeuer, Aleksander Neubauer, Ecologic, Germany
- 17.20 Summary of the first conference day and closing
- 19.30 Dinner in the Krzysztofory Palace at the Main Market Square, Cracow

Thursday, June 12, 2007

Session III:

Decision support for municipal waste management

Chairman: Robert Francis, Cardiff University, UK

- 9.00 Application of policy instruments in waste management – Naoko Tojo, IIIIEE – Lund University, Sweden
- 9.30 Assessment of environmental efficiency by applying CBA and CEA on the case studies – Roland Fehrer, Vienna University of Technology, Austria
- 10.00 HOLIWAST decision support tool - Bo Weidema, 2.0 LCA Consultants, Denmark
- 10.30 Coffee Break

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| 10.30-12.00 | Demonstration of HOLIWAST tools – BRGM, 2.0 LCA Consultants - Hall |
| 10.30-12.00 | Poster Session - Hall |

- 11.30 European Waste Sector Assistant - EUWAS – Jurgis Staniszkis, APINI, Lithuania
- 12.00 Panel discussion and summary of the conference - *Chairman: Paul Brunner, Vienna University of Technology, Austria*
- 12.50 Closing of conference
- 13.00 Lunch
- 14.00-19.00 Visiting of the Wieliczka Salt Mine, UNESCO First World List of Cultural and Natural Heritage
- 14.00-17.00 Technical tour to Waste Treatment Facility , Barycz, Cracow

Participants

We invite representatives of national and local administration responsible for waste management, representatives of companies dealing with waste management and representatives of research institutes to take part in the conference.

What are the benefits from participating?

- ☐ The chance to hear the speakers presenting the innovative approaches of HOLIWAST project and holistic tool for helping local decision makers in the choice of waste management system.
- ☐ An opportunity to discuss new ideas and concepts with experts from various European countries
- ☐ An overview of the current state-of-the-art of municipal waste treatment technologies within an integrated waste management framework for different socio-economic contexts

Language

Conference languages will be Polish and English. Simultaneous translation will be provided.

Scientific Committee

Paul Brunner – University of Technology, Vienna, Austria
Krystyna Czaplicka – Główny Instytut Górnictwa, Katowice, Poland
Józef Dubiński - Główny Instytut Górnictwa, Katowice, Poland
Michele Galatola – European Commission, Brussels, Belgium
Thomas Lindqvist – IIEE – University of Lund, Lund, Sweden
Jacques Villeneuve – BRGM, Orleans, France

Conference Office

Główny Instytut Górnictwa, 40-166 Katowice, Plac Gwarków 1
Registration: Lucyna Szoltysek, email: l.szoltysek@gig.katowice.pl or l.szoltysek@gig.eu
phone: +48 32 2592623, fax +48 32 2596533,
Conference programme: Alina Rejman-Burzyńska, email: a.rejman-burzynska@gig.eu; phone: +48 32 2592619
Eugeniusz Jedrysik, email: e.jedrysik@gig.eu; phone: +48 32 2592477

Cracow

Cracow is one of the most beautiful and most often visited cities in Poland. This is an exceptional town, famous for its charm and enchanting atmosphere. On Wzgórze Wawelskie, Polish kings were crowned, lived and were buried, since between the 11th and 17th centuries Kraków was the capital of Poland. Kraków Academy, the first Polish higher educational institution, opened its doors here in 1364. Kraków is admitted by UNESCO as a world's relic of culture. In the special atmosphere of the beautiful and mysterious streets of the Old Town and Kazimierz you will find everything you need to allow you to escape from everyday life.

More facts and links

Cracow's Web Service
<http://www.krakow.pl/eu/>

Place of the Conference

The Conference will take place in Cracow:
Jagiellonian University
Auditorium Maximum, Conference Room
Krupnicza street 33

Home: <http://www.uj.edu.pl/boin/eindex.htm>

Travel

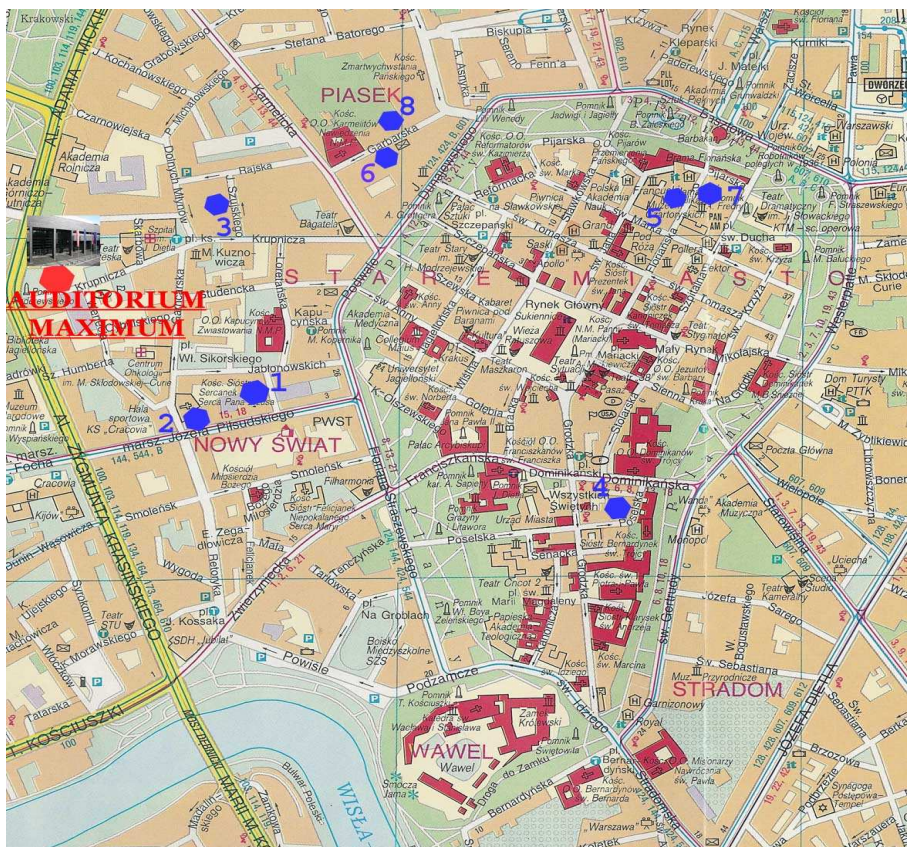
We recommend to fly to Cracow – Balice or Katowice-Pyrzowice that are the nearest airports.
Shuttles buses from Cracow-Balice airport to the Cracow City Centre are available.
Buses: 192, 602, 208. The transfer takes about 35 - 40 min.
Buses schedule is available on the site: <http://www.komunikacja.krakow.pl/lot/>
Transfer by taxi: approximate price 10-20 Euros
Shuttles buses from Katowice-Pyrzowice airport to the Cracow Centre can also be available and provided by some air companies.

Accommodation

For accommodation of conference participants the following hotels will be available: Fortuna***(1), Fortuna Bis***(2), Logos***(3), Wawel–Tourist*** (4), Floryan***(5), Alexander***(6), University Guest House** (7), University Guest House “Pigoniowka”***(8) – *see access map*.
All mentioned hotels have been chosen taking into account the nearest distances to the place of the conference. The hotels are all situated in the centre of Cracow near the conference venue. The rooms will be distributed on a first come first serve basis.
Please see hotel reservation form with the list of recommended hotels with all information given.
For accommodation registration, please contact:

E-mail: cbin@adm.uj.edu.pl
Jagiellonian University Events Office
24, Gołębia Street
31-007 Krakow, Poland
Fax/phone: +48 12 663 38 58

Access Map



Registration Information

To register for the HOLIWAST Conference, please fill in the following registration form and return the completed form (by e-mail or by fax) **before 1 May 2007** to the Conference Secretariat:

Mrs. Lucyna **SZOLTYSEK**, Central Mining Institute (GIG)
40-166 Katowice, Plac Gwarkow 1, Poland
Phone: (48) 32 259 26 23 Fax (48) 32 259 65 33
E-mail address: lszolytysek@gig.katowice.pl

No conference fee

During the Conference all participants will be provided with:

- Information package,
- Simultaneous translation service,
- Lunch on the 11 and 12 June, dinner on the 11 June and refreshments during the breaks

Conference tours:

Tour 1. Technical tour to Waste Treatment Facility, Barycz, Cracow (free of charge)

Tour 2. Tour to Wieliczka Salt Mine (group of 35 people) - cost to be paid by participant approx. 20 euro (including entry ticket, guide and transport) at the registration desk on 11 June.

Web service: <http://www.kopalnia-wieliczka.pl/>

Departure both tours: Tuesday, June 12, 14.00 in front of Auditorium Maximum

Attention: Please register or reconfirm the selected tour (1 or 2) until Monday, June 11, 2007 9.00 at the registration desk!

Currency

The national Polish currency is PLN (Polish Zloty).
The average exchange rate: 1 Euro = approx. 4.00 PLN



CALL FOR POSTERS

International Conference

Decision Support for Waste Management in the EU

June 11 – 12, 2007, Cracow, Poland

The International Conference “Decision Support for Waste Management in the EU” will be a forum for presenting the latest research findings on decision support tools for municipal waste management. In addition to session presentations, conference participants may view posters.

The poster session provide an excellent forum for authors to present their research and innovations on the municipal waste management in an informal and interactive setting. Posters that present work in progress and draw important conclusions from practical experience are especially welcome. Posters are intended to provide authors and participants with the ability to connect with each other and to engage in discussions about presented issues.

Posters are being solicited in areas including but not limited to:

1. Lessons learned of implementation of EU Waste Policy in local and regional level
2. Current state and future perspective of municipal waste management – case studies
3. New approaches and emerging of waste treatment technologies
4. Decision support tools for waste management

A submission must include an abstract of up to 1 page. Abstract and posters can be written in English or Polish.

Abstract (PDF) should be submitted **by 1 April 2007** via email to the Conference Secretariat: l.szoltysek@gig.katowice.pl

Mrs Lucyna Szoltysek
Phone: (48) 32 259 2623
Główny Instytut Górnictwa,
40-166 Katowice, Plac Gwarkow 1, Poland

Abstract of posters will be peer-reviewed by the Poster Committee. Authors will be notified by 15 April 2007 of the status of their submission.

During the conference poster session, posters will be reviewed by Poster Committee. An award will be given at the conference for the best poster.

Posters will be displayed on 11 and 12 June, 2007 where one of the conference major social events (lunches) take place. Poster authors are responsible for setting up and taking down their poster, and staffing their poster during the poster session. This will give all conference participants the opportunity to view all posters and to meet authors.

The size of the board for the poster is about 1.00 meter wide and 2.50 meter high.