

## INFLUENCE OF DAMS ON THE ENVIRONMENT IN EASTERN TURKEY

Turkey's economy is growing permanently for many years what is supported by the government. The growing economy of Turkey requires a high power demand and thus more and more power plants every year. Besides two planned nuclear power stations, the biggest proportion belongs to hydropower because of the existence of rivers although some of them are quite small and narrow.

According to the Ministry of Energy, Turkey consumed 242 billion of kWh electrical energy in 2012 which is 5% more than 2011's consumption. In 2013 it is expected to increase further 8% of the consumption in electricity. Energy experts say that in the last decade, Turkey had the biggest raise of energy need in the world after China and it still requires approximately 10 billion US\$ of investment every year to compensate this lack. After all, the Turkish government made short and long term plans accordingly.

There is a plan in Turkey now to have approximately 2000 hydro electrical power plants. It brings new discussion to the country whether we need them or not and more critically, if they will give harm to nature and environment. Most of them will be built in northern Turkey (Black Sea Region) where most of the country's mountains and green wild areas stay.

These projects brought resistance and protest from the people who are living in those villages by the support of NGOs. These organizations are trying to inform people living around and showing them how hydro electrical power plants affect the environment. As the first people to be affected by natural disasters, they are being educated and told to be against to most of the projects. Their resistance is more valuable because environmental impact assessment should be approved by them at first step.

There is not only a negative impact caused by the dam projects on the green environment (Flora) but also the living environment (Fauna) is starving from the captured spring waters and rivers. The number of wild animals and their habitats decreased dramatically since they started to lose water to survive.

There are also social impacts of hydro electrical power plants which should be taken into consideration as well. Turkey has different kinds of religious groups and some of the mountains and rivers are considered as holy places. Whereas some parts of Anatolia where the biggest part of Turkey geographically lies on have more than five thousand years of historical habitat and some of them are still used by people who do not want to leave their ancestors' land. The most famous one is Hasankeyf (Figure) where is one of the oldest habitats

of human beings. Because of the river's potential of power, it is under danger of disappearing underwater.

Turkey has an increasingly need of energy and hydro electrical power plants are one of the renewable energy sources but it does not mean that it should be built in every opportunity where it can be built. The negative impact to the environment and the society with full sustainability assessment must be studied with considering point of view. An

alternative scenario could be reduction in energy consumption. First step of decrease the energy demand is to reduce the waste of energy starting with our houses and in industry. Economic growth is important but the environment that we are living in will belong to the next generations which we should consider as well additionally respecting the history.

• Arif KARAHALIOGLU  
WASTE alumnus generation 2010



Figure: HasanKeyf is under danger of hydro electrical power plant



## RETURNINGS EXPERTS PROGRAMME

June 25<sup>th</sup> WASTE students together with students from the other international master programmes had the opportunity to attend a presentation from Ms. Nadine Schneider from the Center for International Migration and Development (CIM). I must say that at the end of the presentations many of our questions about our possibilities after finishing our studies were fully answered.

Ms. Schneider explained about a program design for international students from emerging countries that want to return to their home countries and apply the knowledge and skills learnt abroad. Among the benefits of this programme are assistance from advisors to find suitable job vacancies, financial assistance for the cost of travel to interviews or for internships, payments to top up the local salary, and subsidies for equipment in the new workplace. Financial assistance for entrepreneurs is also available.



Centre for International  
Migration and Development  
a joint operation of GIZ and the

The second part of the presentation was about the possibilities that exist to stay in Germany after finishing the master programme. Ms. Schneider explained the procedures to obtain an extension of the Visa for 18 months after the graduation and as well the steps to follow to obtain a working status Visa and finally a permanent residence. This part of the presentation was very instructive and she was very kind in answering all our questions.

There is no doubt that there are a lot of opportunities to either go back to our home countries and apply the acquired knowledge or stay in Germany and gain more experience. Thanks to the WASTE board, who offers this kind of information that is very useful for our future as postgraduate alumni.

• Francisco CARRASCO MALDONADO  
WASTE student generation 2012

For more information: [www.cimonline.de](http://www.cimonline.de)

## EUROPOSGRADOS 2013 IN CHILE

Between the 4<sup>th</sup> and 9<sup>th</sup> of May this year, the „Europosgrados 2013“ was held in three cities of Chile: Santiago, Antofagasta and Concepción. From the north to the middle of the country, we convened bachelor students and shared the experience with them to study abroad, learn another language and live in an international environment.

Mr. Vogt and I had the opportunity to represent the Universität Stuttgart in the fair as part of the German commission consisting of more than 15 universities. The experience was amazing – not only because of the amount and the quality of the students – but also because Chile is a beautiful country. When we were flying to the north in a two-hour flight, the landscape seen from the airplane was limited to

two colours: orange of the sand and blue of the sky and the sea. To the right and far in the background the cordillera of „los Andes“ shows the end of this country.

Between Antofagasta and Concepción – with a distance of around 1900 km – colours start to change from orange to green and it seems like you are in another country. Nevertheless this is not the end of Chile. This particular and elongate country extends another 2400 km from Concepción to Tierra de Fuego.

This experience was incredible: Well prepared students, meetings with two of the top 5 universities in Latin America and a wonderful trip with totally different landscapes.

As a Latin American I can say that I feel very proud of the young people who

are ready to explore the world and very proud to be part of an amazing natural environment.

• Maria Jose VILLALOBOS  
WASTE student generation 2011



## Studying WASTE

### DRESDEN: A CONSUMMATE ASSEMBLAGE OF INTELLECTUAL MINDS

„Climate Change and Regional Response 2013 (CCRR)“ the title itself was intriguing. The international conference of „CCRR“ was conducted in Dresden from May 27<sup>th</sup> to 29<sup>th</sup> 2013. We were given an opportunity by IPSWaT to attend the conference. IPSWaT is the abbreviation for International Postgraduate Studies in Water Technologies, which is the donating organisation of my scholarship. Every year the scholars, their supervisors and the International Bureau of IPSWaT meet once in the annual IPSWaT meeting. The key note speakers of the conference were enlightening. We were introduced to the regional influence of climatic changes and the possible ways of adaptation to the climatic changes in and around Dresden. The difference between mitigation and adaptation was also discussed and it was concluded that adaptation was the most appropriate way to deal with climatic changes. An integral part of adaptation was also suggested to be „Sustainable development“.

The orators were highly adept and they showcased great insight in the re-

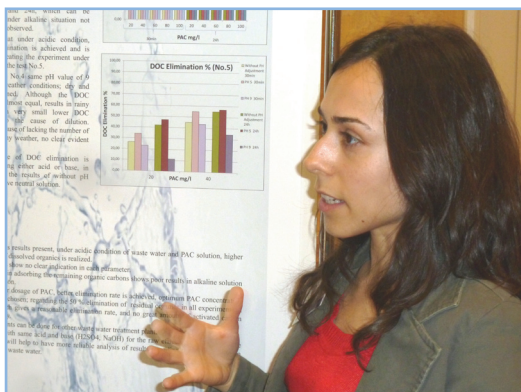
alm of climatic change. We have enough data and now we need to comprehend the data and take the necessary action, research has to be multidisciplinary, i.e. between theory and practical work, uncertainties should be reduced, risk technologies need to be developed etc., such were the conclusions of the conference. A part of the conference was also a poster presentation, where we interacted with the experts in certain domains. It was an exciting and cognizant experience to converse with the professionals. We stayed in INTERCITYHOTEL, Dresden where, the services rendered were out of the top draw. However, the dinner provided was really appalling and the vegetarians faced a lot of problems. THE WESTIN Bellevue Dresden, where the conference was held was majestic and the lunch served was exotic and sumptuous. The conference was very informative, however I believe, it would have been more beneficial and motivating if the climatic changes on the global scale were considered, as it was an international conference and most of the audience were from all over the world.

Unlike the previous IPSWaT session, when I had absolutely no idea what to expect, I knew this time that those four days were going to be the most



memorable days of my life. In the last annual IPSWaT meeting which took place in July 2012, it was decided that the next meeting will be arranged in May 2013; however we were also unlucky with the weather this time. During our entire Dresden trip, it was pouring continuously. Hence our entire photo shoot was done with umbrellas. Evenings were entirely dedicated to explore the night life in Dresden. Few local students were kind enough to take the other scholars to the most happening and live night clubs in Dresden. On the last day of the conference we had the time to visit the archaic buildings in Dresden. Dresden named as „Jewel Box“ is befitting, as the baroque and rococo structures in Dresden are architectural wonders. The Frauenkirche, the Semperoper, the City Hall and the Zwinger Palace are remarkable. The river Elbe, on the banks of which Dresden lies adds to the gorgeousness of Dresden.

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## >>> DRESDEN: A CONSUMMATE ASSEMBLAGE OF INTELLECTUAL MINDS

The scholar's meet in Dresden on May 30<sup>th</sup>, was my second and the last meeting during my masters programme in Germany. Interesting arguments on the water reuse and waste water treatment and waste water management were presented. One particular topic which I found convincing and advantageous for Germany was the reuse of water in breweries. Presentations were followed by a poster presentation,

which gave me an overview of the various researches going on all over Germany. The meeting was concluded by a closing speech by Mrs. Cornelia Parisius.

The camaraderie between all of us improved in leaps and bounds and this meeting was a springboard for me to foster international relationships. As most of the scholars were meeting for the second time, stronger bonds of friendship were establis-

hed between us. After the speech the room was filled with promises to be in touch. It was a touching moment to finally bid adieu to your buddies and to get back to my mundane routine. I am immensely grateful to this esteemed organization IPSWaT for giving me this wonderful opportunity which I will cherish for the rest of my life.

• Tanaya THORBOLE  
WASTE student generation 2011

## EXCURSION TO DAIMLER PAINT SHOP IN SINDELFINGEN



Photo: DAPD

On the morning of January 25<sup>th</sup>, a group of students and professors from the WASTE programme visited the installation of the Daimler paint shop located in Sindelfingen. This excursion was organized as part of the lecture: „Primary Technology in Environmental Protection“ taught by Prof. Kohler, who is the vice president of the research and sustainability group in Daimler; and also, as part of the lecture: „Firing Systems and Flue Gas Cleaning“ taught by Prof. Baumbach and Prof. Scheffknecht.

First, we were welcomed to Daimler in the luxurious movie theater of this company. There we watched an introductory video, which briefly showed the history of

the brand, the vast variety of car designs, locations around the world and especially, how well they care about the wellbeing of the workers. Afterwards, we were invited to a presentation about the coating process of the cars in the paint shop and the environmental techniques employed by Daimler to reduce and control the emissions of paint solvents, particularly volatile organic carbon compounds (VOC) to the atmosphere.

This company has gone to a process of continuous research and development, in order to stick to regulations, maintain a product of quality and keep sustainable practices. In the 1990s, water-based paints were introduced; this allowed the reduction of solvents up to 70%. Recently, in 2009, a new technology was introduced which reduced almost completely the emissions of solvents and CO<sub>2</sub>, consumed less time, minimized the amount of contaminated waste water, reduced costs and saved energy; it was by the introduction of special fast-dry paints that dry in just 90 seconds and by employing ultraviolet light. Compared with typical paints which take 30 minutes

to dry at 80 °C, this was a great advance.

After this presentation, we visited the installation and saw the scrubber water and the process of reutilization, reducing the water demand and further contamination. We also saw the site with filter houses, thermal oxidizers and UV-light cage.

As part of the tour, we visited the assemblage sections, where the cars are assembled by machines and only special parts are put in aided by workers. To our impression, it was a very secure place. It was incredible to see all these huge machines operating, and people around to finally create such beautiful cars.

Finally, we enjoyed a delicious lunch at the first class restaurant in Daimler Sindelfingen.

On behalf of all of us who participated in this excursion, I want to thank the professors and people responsible of organizing it. It was a very interesting experience, in which we could see many of the concepts in reality that were explained in lectures.

• Johanny PEREZ SIERRA  
WASTE student generation 2011

## VISIT TO THE BIOGAS PLANT IN LEONBERG

It was the 1<sup>st</sup> of February when we met very early to go to Leonberg by bus. All was very good organized by our lecturer Dr.-Ing. Carla Cimadoribus.

We reached the plant at about 10 a.m., our guide was very friendly and he had a strong „schwäbischen Akzent“, but not difficult to understand, also Dr. Cimadoribus translated everything at the same time.

This plant is very interesting, it belongs to the municipality of Böblingen and since 2005 it collects all the biowaste in a 25m high fermentation tower. All the biogas produced will be used as electricity and heat.

Leonberg has a capacity of 35,000 t every year of biowaste. After the collection, the size of the biowaste will be reduced through a chain scraper, then it will be



homogenized and pass through a magnet separation before going to the reactor.

The reactor (plug flow reactor) works between 48 °C to 55 °C, it has a recirculation rate of 6:1 and works through gravity. The biogas is stored in a double membrane external tank and has a post treatment in

order to eliminate odours and NH<sub>3</sub>. Afterwards it will be transformed in heat and electricity. Part of the heat produced will be used to dry the substrate and other part will be used to keep the temperature of the reactor.

It was very interesting to see all the things that we learned in class reflected in the real life, the teacher was always really helpful answering all our questions and explaining everything and our guide was really nice and let us see all the plant without restrictions.

We learned a lot and I am looking forward for the next excursion! Thanks for the wonderful time!

• Marcela Patricia KOCH THIERRY  
WASTE student generation 2011

## MY TRIP TO BERLIN: EDUCATION AND RECREATION



To travel around just for the sake of travelling and to travel with some agenda are two different things. I am here in Stuttgart since almost eight months now and I must say that I have done some travelling. I am always eager and curious to know different places, and this habit of mine is sometimes exhausting. But, it is true that travelling with educational purpose is really worth-it. In context to this, I was able to go to the capital city of Germany, Berlin. As a scholarship holder of IPSWaT (International Postgraduate Studies in Water Technologies), I had the opportunity to participate in the „Wasser Berlin International 2013“, held in Messe Berlin. Wasser Berlin is a one stop solution to bring supply and demand together. Wasser Berlin 2013 included tra-

de fair, congress and public show under one roof.

The five day long programme, from April 22<sup>nd</sup> to 26<sup>th</sup>, was managed by German Association for Water, Wastewater and Waste (DWA). I along with other 48 people were participant of the Young Water Professionals Program and accommodated together. On the first day, it was overwhelming to meet forty-eight new people, coming from seventeen different countries from all over the world. Even until the

end of the week, it was chaotic for me to learn all the names of the participants. The sightseeing tour of Berlin was well enjoyed by all. It was my first time in Berlin, and I thoroughly enjoyed the tour of the important landmarks and places of historical events.

The trade fair and conferences were educative. I got to learn about sanitation and different aspects of water management. Various sessions in the congress were going on parallel and it was a pity that we were not able to take part in many of it, due to time

constrain. The Young Water Professional Lounge provided us with the much needed place to relax from the trade fair visits and excursions, presentations discussions and exchange impressions of the fair, the events and the conferences. The first Young Water Professionals' Conference also took place here, with the topic „Household Water Treatment and Safe Storage“.

Excursions „Schaustelle Wasser Berlin International“ and „Water Works“ were really informative for me. As I come from Nepal, where not so much has been explored in the fields of drinking water treatment and waste water treatment, I was na-

ive to the technologies used here. I was awestruck by the processes and the measures taken to purify the tap water as well as the waste water.

After having this unparalleled experience, my horizon of knowledge has broadened. I was able to get acquainted with people working in the field of water quality and treatment, and along with that, travel around and see the city, „Berlin - the city of diversity“.

• Sukriti SUVEDI

WASTE student generation 2012



## EXCURSION TO THE OIL REFINERY PLANT MIRO

It was still dark when Ms. „Fahrerin“ started up the bus, heading towards Karlsruhe. I was a bit worried about the bus trip, since last time I had hyperventilation when we were about to arrive in Ulm and Marta Escoto, the supervisor, had to call the ambulance.



Photo: [www.ka-news.de](http://www.ka-news.de)

But the way to the MiRO (Mineralölraffinerie Oberrhein GmbH & Co. KG) turned out to be very smooth, no drama happened, the sun even came out. We were welcomed straight by a „Kaffeepause“: coffee, juice, tea, fruits and biscuits, which was a total surprise, at least for me. Though later I found out from the presentations that MiRO is the 3<sup>rd</sup> biggest oil refinery company in Germany, has the size of Karlsruhe city. Well, in a word, it is a „rich“ company.

I am not a chemical engineer but thanks to the lectures of Dr. Eiden, I could follow the presentations without too much

effort. In total there were three presentations: the first about some general info about MiRO, the latter two about technical issues.

As a young company, MiRO has four share-

holders: Phillips 66, Esso, Ruhr Öl and Shell and about 1,000 workers excluding the subcontractors. It refines crude oil into petroleum products such as benzene, gas or petrol, diesel, heating oil, propylene and bitumen, of course according to the specific demand of the customers. The crude oil comes from east Europe, central Asia and also Africa and is transported to a harbour city in Italy, where pipelines are constructed to bring the oil all the way to MiRO. Though the quality may differ, the oil is mixed together first, with necessary additives, waiting to be processed. The procedure, to be short, is just distillation after distillation. Since we are „WASTE“ students, the focus of the

last presentation was on environmental issues. Apparently new standards have been scheduled and procedure optimization or technics upgrade are undergoing.

After the presentations we went back on the bus and took a guided tour of the whole plant. I was a bit disappointed, thought the tour could have been more in detail if by walking. Obviously I underestimated the size of an oil refinery plant. The plant site is divided into two parts by a river. Countless distillation columns of different heights and sizes were marked with numbers. Thousands of pipelines connect one column to another. Even by bus, it took about half an hour to finish the tour, under low speed of course.

The lunch afterwards was abundant. It was always a blessing to have a full stomach. Then I started to wonder if I could get this from a „green energy“ company. Obviously the oil industry still counts as the No.1 in the energy business, however hot the „green energy“ concepts are. There is a long way to go.

• Junwen CAI

WASTE student generation 2011



## GREAT WAREM-EXCURSION

As the excursion date was nearing, I was keenly looking forward to the „Great WAREM excursion“. It was 7:30 a.m. and we all gathered near the bus. We loaded all our bags and took our places next to our friends, and then the journey began. It was a 6 day long trip with a well-planned schedule that was headed by the WAREM course director Dr. Schneider and by Dr. Seidel. It was a great mixture of our curriculum and fun which only made it „one of the best excursions ever“.

We started off our trip by driving to Cologne which is the fourth largest city in Germany. We had a guided tour of the beautiful Cathedral which is the largest Gothic church in Northern Europe. It is also been declared a World Heritage site owing to its immense architectural beau-



ty. After dinner at the student hostel we made our way to the wine festival in the city and a pub to relax before we retired for the night.

On the second day of our trip, we visited an Open Pit mine in Garzweiler, a Lignite mine with an area of 48 km<sup>2</sup>. We drove through the mine and were able to catch a glimpse of the huge excavators and the conveyor belts that ran for 20km to transport the excavated coal. We got to witness the various pro-environmental measures that were taken to rejuvenate the destroyed land and to reduce the dust emissions during transportation of the coal. Then, our journey continued to the Wasserverband Eifel-Rur office in Düren and we participated in a presentation which gave us a brief idea of the water management systems being employed by them to provide and protect the 1.1 million habitants living in their service area. Our next stop was for a guided tour of a wastewater treatment plant in Düren which had a biogas plant. And then we headed to our hostel in Nideggen which overlooked a beautiful castle that we visited later on that day.

The third day started off with a visit

to the Jülich Research Centre where numerous scientists and PhD students presented their work. We were given explanations on the working of a lysimeter and also did a soil conductivity experiment. We then drove to Rotterdam and checked in at our hostels. After dinner we all headed out to enjoy the night life of the city.

About 40% of the Netherlands is prone to flooding due its low-lying geography hence we visited various dykes and barriers built for prevention and control of flooding making this day one of the most beautiful days of the trip. We visited the Maeslantkering Barrier which is a storm surge barrier located at Hoek Van, Holland. It is one of the largest moving structures in the world built to improve the safety against flooding of the Rotterdam harbour, the surround-

ing towns and agricultural areas. Then we headed for a guided bike tour through Kinderdijk Windmill District. The windmills of Kinderdijk are one of the best known Dutch tourist sites. It has been a UNESCO World Heritage Site since 1997. They were built to drain the polder in 1740. The scenic beauty of the place was overwhelming making it the best part of our excursion. We could appreciate the engineering and effort that was put to prevent major flood events in the country.

Day five of our trip started with a visit to the Rotterdam Harbour which stretches over a length of 40km making it the third largest port in the world and the largest one in Europe. We then drove to Oosterschel-



another storm surge movable barrier. It is a 4km long barrier which operates during adverse weather conditions. We then drove to Brussels the capital city of Belgium and spent time visiting the famous Mannekin Pis and the Grand Palace. We got to try its world famous chocolates and beer.

On the last day, we made our last stop at a pump storage power plant in Vianden. This has been in operation since 1964 and has a capacity of about 1096MW. After this, we made a quick stop at a beautiful castle for our last group picture before we headed back to Stuttgart. We came back home with happy and content hearts waiting to share our experience with our families and friends. During the trip we were able to learn how we can apply what we are studying and the different ways we can contribute to the world. I am thankful to the WAREM Master Program for the immense effort they put into organizing such a beautiful excursion and also for giving the opportunity for the other programme students to join them. It was an educative yet a fun filled excursion.

• Amulya BASAPPA  
WASTE student generation 2012





## 3W ISTANBUL 2013 CONGRESS – THE WASTE TALE



In May a group of WASTE students from both generations 2011 and 2012 visited on their own Istanbul and attended the International Solid Waste, Water and Wastewater – „3W“ Congress that was held in the Halic Congress Center between the 22<sup>nd</sup> and 24<sup>th</sup> of May 2013. The Congress was organized mainly by the Istanbul Metropolitan Municipality, the Ministry of Environment and Urbanism and the Ministry of Forestry and Water Affairs of Turkey.

The first day, Wednesday the 22<sup>nd</sup> of May, the opening ceremony took place as well as the speeches from the Chairman of the Executive Committee, the Mayor of Istanbul and the Ministers of the above mentioned Ministries. Right after we visited the poster exhibition and the fair, where different private companies participated. Then the scientific program of the Congress started with parallel sessions among the three different sectors (Solid Waste, Water and Wastewater) that lasted until late in the afternoon. The second day, the whole morning was dedicated to scientific presentations and the afternoon was shared between scientific presentations and training courses. During the scientific program a variety of interesting topics were introduced and the results of numerous studies and publications were

presented. During the discussions the importance of the proper design and the holistic approach of a sanitary engineering system was highlighted, especially in fast-growing countries like Turkey. Our University, and more specifically the Institute of Sanitary Engineering, Water Quality and Solid Waste Management (ISWA), was represented by important key-note speakers and a number of presentations that demonstrated the significant research work conducted by our Institute.



Part of the Congress was also the training courses that took place the last two days. The last day, the courses also included a technical visit, for instance, we visited the Atakoy Advanced Biological

WWTP that was put into service in 2010. The specific WWTP serves now 2.5 million people with a total capacity of 400,000 m<sup>3</sup> per day and after the completion of the second stage of construction its capacity will increase to 600,000 m<sup>3</sup>.

Apparently our trip to Istanbul was a great chance to meet the city and discover its beauty. Istanbul has been the capital of three empires, the Roman, the Byzantium and the Ottoman Empire and the visitors can enjoy the harmonic combination of all these thousand years of history. Istanbul is the crossroad between Europe and Asia and is in fact the only city worldwide that spreads over two continents. Having the perfect summer weather as an ally, we visited plenty of historical monuments and picturesque places, walked in the beautiful alleys and bazaars, tried the delicious Turkish cuisine and even got the chance to visit a beach and experience a taste of summer, which seems to be delayed this year in Stuttgart.

All in all, it was a week full of experiences and I want to personally thank my classmates for the pleasant moments that we shared. I can't wait to meet you all again, and even more of us next time, to our next excursion!

• Panagiotis OIKONOMOPOULOS  
WASTE student generation 2012

## SOLID WASTE EXCURSION



In December 2012 nearly half of the people from WASTE Generation 2012 went to see a fermentation plant, a landfill and the location, where people bring recyclable material.

After starting early in the morning at University Mr. Fischer brought us to the fermentation plant in Leonberg, where we did not only get a good overview over the

process of digestion but also a great overview over the whole region. The reason was the digestion tower with a height of 24 m over the ground, which we were allowed to climb onto. This nice view helped to forget the quite smelly atmosphere we stayed it.

After that we were driven to a landfill. The most impressive thing here was the fact that you can not find any visible waste here. All you were able to see was soil and plastic foil to cover some area. None of us expected a landfill to be that „clean“. It also was very interesting to be shown all these details about the ground layers and the potential of generating electric energy by the landfill gas.

Our last stop was finally the collecting station of recyclable material in Ludwigsburg. The special thing about this compared to others is the fact that you can not only bring stuff you do not need anymore,

but you can also pick up furniture, electric devices, bikes or anything else other people give away. They introduced a shop where they sell all these things that still look good for little money to people who want to buy used things. By this they reduce the amount of waste need to be treated and offer an opportunity to people who do not want to spend a lot of money for things. WASTE-students used this opportunity quite intensively, so that nearly everybody bought something, starting from a coffee cup over pictures coming to tables, benches and chairs. In fact some had to come back the following day with a car and a trailer to pick up all they bought.

All in all it is to say that it was a very nice excursion. You can learn a lot of things in class, but you'll only understand them and get a feeling if you can see them

Thanks to Mr. Fischer for that nice opportunity!

• Marc WUTSCHERK  
WASTE student generation 2012



## Recent events

### INTERNATIONAL FOOTBALL TOURNAMENT 2013

Finally the summer came to Germany. After long weeks of waiting for the sunny days, the barbecues, the green fields in our campus, the cold drinks with friends near to lakes, rivers etc. the summer is here, and what better way to celebrate it and greet this long-awaited season than enjoy a beautiful Saturday with the family of the WASTE Master Programme.

On June 8<sup>th</sup>, 2013, the International Football Tournament was celebrated in the sports facilities of the Universität Stuttgart. Twelve teams of different programs, including WASTE, WAREM, COMMAS, MIP, GEOENGINE, ENWWAT, IUSD, INFOTEC and PHYSICS participated in this traditional celebration.

The day started early in the morning with the first leg of the tournament. The players warmed up, the fans were ready to cheer for their friends and of course since we are in Germany, the cold beers and the barbecue were ready to quench the thirst



and satisfy hunger of the athletes and fans. The kick-off was done, a strong competitive feeling was part of every game, no matter if the teams were playing to decide the winner of the tournament or the 11<sup>th</sup> place. After more than thirty intensive games, the lecturers team won the championship. Last year's champion WAREM, reached the final but could not defend its crown.

The WASTE team played a very good tournament, supported by the biggest and loudest group of fans, but unfortunately they lost in the semifinals and finished with the 4<sup>th</sup> place.

The support of the fans until the last minute and the fair play demonstrated by all participants created a great and very friendly atmosphere. The day finished with a party in Unithekle that included the award ceremony, good food, drinks and dances for those who could keep moving their legs.

I am very pleased to have been part of this great event and to have enjoyed that day with my friends of WASTE. Hopefully I will participate next year again defending the colors of this Master Programme that made me feel since the beginning as part of the group, as part of the family.

• Harold GARCIA  
Ph.D. Sstudent from Colombia in IFK

### WASTE NEW YEAR'S PARTY

We had the opportunity to share with all our colleges, friends and professors an extraordinary party. In this opportunity most of the people were from both generations of the WASTE program. I would like to congratulate all the people involved in the organization of this party because it was a great party in all senses. There were plenty of food and drinks. We counted also with the ingenious of Mr. STRZALKOWSKI in order to create so different games and dynamics which bring so much fun and an opportunity to deal with our friends outside the lectures rooms. The music, which was performed by our wonderful class speaker Ms. RESTREPO VE-



LEZ was awesome because she could keep a good atmosphere, even due the fact we come from over all around the world, and it is not easy to please everyone. Anyway there were enough for everybody, Latin Music, Pop, Persian music etc.

There was a lot of fun with the crazy games, everyone trying to integrate themselves into a foreign dance. I was trying to learn how to dance like the Persians do, and to try their particular tongue scream celebration. At the same time I was teaching how to dance a little bit salsa and bachata.

We could show to other friends who were visiting us in this party, how good and strong is WAS-

TE spirit for parties. We give all the energy in the classrooms during the lectures but also on the dance floor too. It was showed too, that the logistic and organization stuffs are not a problem at all for our task force members, again BRAVO for all of you!!

I would like to emphasize the fact that these kind of activities are really good for our integration as a WASTE family. I know that not everybody of the program was there, due different facts, but it would be great for the next events to share also with the people who still yet have not been in it. We also have to get to know us outside the classrooms. That creates somehow strong friendships bridges. Finally I wish we could have again the next year this party. It will be for sure as good as this one or better. We will be counting also with the next WASTE generation so I hope that everybody attend it.

• Victor Manuel GOMEZ PADRON  
WASTE student generation 2012

### DATES TO NOTE

- Waste Intercultural Meetings "WIM" in upcoming winter semester every 3-4 weeks
- Aug. 19<sup>th</sup> - Sep. 13<sup>th</sup> 2013: Exam period
- Sep. 2013: Arrival of 12<sup>th</sup> generation
- Sep. 14<sup>th</sup> 2013: Welcome Excursion
- Oct. 14<sup>th</sup> 2013: Start of lecture period
- Nov. 16<sup>th</sup> 2013: Grad. Ceremony 2013
- Dec. 21<sup>st</sup> 2013- Jan. 6<sup>th</sup> 2014: Christmas Holidays
- Jan. 15<sup>th</sup> 2014 - Feb. 15<sup>th</sup> 2014: Re-registration period for summer semester
- Feb. 15<sup>th</sup> 2013: Application deadline for 13<sup>th</sup> generation starting in Sep. 2014

## WIM - WASTE Intercultural Meetings

### 33<sup>RD</sup> WIM - MOVIE NIGHT „GARBAGE DREAMS“

„Garbage dreams“ deals about the everyday life of a community named Zaballeens, who live in Egypt's capital Cairo and earn their livelihood in the form of recycling waste. But the problem not lies in the recycling of the waste, but in the recognition of their work and on their reputation as individuals in the society.

Though the documentary showcases the conditions of the lives of Zaballeens throughout, it focuses mainly on four individuals. Adham, a youngster planning to build a house for his own and aiming to be the breadwinner of the family as his father got jailed. Osama, guy with a childish behavior, who has a care-free attitude and does not want to get settled in life as well as in a single job. Nabil, a guy with great ambitions of opening a can recycling shop on his own. And finally, Laila, the



community nurse who works for the welfare of Zaballeens and one of the voices of the community. All of their four lives and their experiences reflect the sad state of Zaballeens in their own country, but always with a smile.

The irony of their lives lies in the fact that even after their immense techniques

of recycling, they are not considered as an official one by the government and the government has a totally different perspective on them and their activities.

The documentary also asserts the fact that the Zaballeens have been recycling waste since long time and almost 80% of the wastes from the community are getting recycled, which is just astounding.

Documentaries like this make the people aware about the struggle of different communities in the world in the quest of becoming eco-friendly. As our programme has people from all around the world, I am quite sure that we can get the idea about the situation of the waste-disposal in their respective countries.

▪ Venkateshwaran VENKATACHALAM  
WASTE student generation 2012

### 34<sup>TH</sup> WIM - CARNIVAL PARADE IN STUTTGART



What would a student do in a cold day close to the exams period? Obviously, he would stay at home studying. Howe-

ver, that was not an excuse to do not participate in Carnival Parade in Stuttgart on Faschingsdienstag (Shrove Tuesday), the 34<sup>th</sup> WIM, which happened on the February 12<sup>th</sup> 2013 in the Stuttgart center.

Shrove Tuesday is before Ash Wednesday, which is the first day of lent. Lent is the Christian season of preparation before Easter, then people celebrate, eat and drink food that shouldn't be eaten during the lent. This tradition also happens in many cities of Germany and other European countries.

Despite the cold weather, we dressed up in fun costumes and we went outside to the Carnival Parade with our

own family and friends, forming the WASTE family. The kids (and the big children) love it because the carnival participants throw candy to them.

For those who have never been in a Carnival, it was a great time to have fun, laugh, drink Glühwein, move their bodies to get warm and get some candies. And also for those who are familiar with Carnival, it was very exciting.

I am from Brazil, the Carnival is big and strong there. Nevertheless, the German Carnival is also vigorous and afford us a agreeable time during the winter.

▪ Sara SCHNEIDER  
WASTE student generation 2012

### 35<sup>TH</sup> WIM - NEPAL AND INDIA NIGHT

That Friday evening after the block of lectures of „Industrial Waste and Contaminated Sites“ with Mr. Rapf I was still thinking whether going or not to my volleyball training, which takes place after those lectures. Some seconds later, I decided myself not to go to the training and staying for the WIM. At the end of that evening, I was sure of having taken the best decision.

Listening to the presentations of our classmates Ms. BASAPPA and Ms. SUVEDI about India and Nepal, respectively, was more than interesting. Important to mention during Ms. BASAPPA's presentation are the constant contributions made from Mr. VENKATACHALAM, explaining us from his point of view what she was telling us about India, their culture traditions

etc. Not only Mr. VENKATACHALAM, but also Mr. GOMEZ PADRON from Venezuela participated enthusiastically by asking questions which at the end led us to interesting discussions about Indian culture and customs.

After India, we turned to Nepal and that time most of us had the opportunity to listen by first time to the incredible story and tradition about „Kumari“, the Nepali girls who are believed to be the incarnati-



on of a goddess. Of course this topic also raised many questions and fascinating discussions.

Last but not least, food! From India we tasted some spicy food called „Indian chaats“ and „Bhel“ as well as sweet „Papdi“ and from Nepal we enjoyed the special drink called „Mohi“

This was a really good example of how interesting and also funny WIMs are, mainly because of the first-hand information given by our own classmates.

▪ Miguel Angel GARCIA VILLEGAS  
WASTE student generation 2012



### 36<sup>TH</sup> WIM - A TRIP TO THE FRÜHLINGSFEST

Since I moved to Germany, its wonderful culture keeps surprising me. I thought I already know all the holidays and traditions, but the trip to Frühlingsfest organized by WIM had proved me wrong. Frühlingsfest in Stuttgart Cannstatter Wasen, is an annual fair with beer tents, different attractions, small vendors that are a lot of fun for the people of all ages.

Our trip took place on Tuesday, April 30<sup>th</sup>, 2013. The weather was cold, it was very windy and rainy, certainly unfavorable weather for a trip to a fair. But with a group of about 15 brave students, we headed to the famous Cannstatter Wasen. At first we thought that our trip will be extremely boring, the whole place was completely empty. Nobody was going on rides,

and the entire place seemed empty and sad. But, the mood inside a beer tent was completely different. Many people dressed in traditional German clothes were dancing on the top of benches and tables, singing happy songs in German and English languages, drinking beers from huge mugs, and most importantly having a lot of fun with their friends and family. We joined the celebration at the beer stands because all the tables were full, and entire tent was packed. Everyone with a heavy beer mug,



full of very tasty local beer, we also started to sing and dance to a wonderful band. I had a wonderful time spent with my friends in an amazing atmosphere.

It still puzzles me why so many people came out on a cold and rainy Tuesday night?

The only reason I can think of is that the importance to celebrate old traditions is very significant to Germans no matter how bad the weather is.

• Viktoriya GOMILKO  
WASTE student generation 2012

### 37<sup>TH</sup> WIM - NORTH AMERICAN NIGHT

It all started right after the lecture of hazardous waste and contaminated sites with Mr. Rapf, a long day especially for students who took this class from 9:45 a.m. till 5:15 p.m. Regarding the circumstances everybody was looking forward for the presentations.

We started with the presentation concerning the waste management situation in Mexican tourist areas presented by Ms. Carolina RODRIGUEZ-GONZALEZ. Then Mr. Dan HALL moved on to some cultural



aspects of North America covering the most important celebrations and traditions, showing the different ways of celebrating the most commemorating dates and holidays that are part of the United States' history. To conclude this interactive and interesting discussion with the students, Mr. CARRASCO MALDONADO reported cultural aspects and celebrations about Mexico including various stereotypes, typical celebrations, food, and facts closing with a tourism video spot of Mexican states.

At the end of the presentation some delicious Mexican dishes were served to give the participants a grasp of the exquisite Mexican cuisine. There were spicy and non-spicy dishes, among them we could find chilaquiles, homemade flour tortillas, cochinita pibil, frijoles charros, eggs with machaca, habanero peppers and other sauces, this dishes were prepared by Ms. RODRIGUEZ-GONZALEZ and Mr. CARRASCO MALDONADO. Tequila shots were provided for those who wanted to get to know the whole Mexican experience. In overall this was a successful entertaining, informational and cultural WIM.

• Dan Kirby HALL  
WASTE student generation 2012

### 38<sup>TH</sup> WIM - WASTE ALUMNI MEET WASTE STUDENTS

During the 38th WIM carried out on July 28<sup>th</sup>, various WASTE generations met with one main objective: To offer the younger generation some advice on how they can better manage the time during their studies and what to do after obtaining the degree. It was a nice time where 6 Alumni from different generations and nationalities met with the last generation 2012.

**The owner of a company:** Mr. KEDIA from India was from generation 2004 and now has his own company. He took some time from his hard schedule and by Skype made an interesting presentation. He said: to do a company is a great experience but you need to work a lot and to be patient. Moreover, he told us that in developing countries to develop new ideas is difficult and you have to manage some politician's issues. Furthermore, he expressed how much he enjoyed his experience during his studies in the WASTE programme.



**Working in a German company:** Ms. TITTESZ (WASTE generation 2007) is working in EISENMANN since 2009 as Process Engineer. She presented an overview about the company and after that she offered some tips about how to get a job (CV, emails, etc) and how to act in an interview (be yourself, self-assured appearance, etc). Also, she said that it is necessary to learn the German language and thus you can

improve the job opportunities. Mr. RIVAS from generation 2010 presented a summary of his time in WASTE programme and besides he gave some tips about how you should present your CV (in English or German) and some important information over the working visa, annual salary, etc.

In our cases (**Ph.D. researchers:** Ms. MOARKECH, Mr. BIDWE and I), we tried to do a brief presentation of our Doctoral topics and also to explain some details about how is the work and the life being a Ph.D. researcher. Herein, the most important aspects were: financial support for your complete research (scholarship or to get a position in the institute), working atmosphere and how to do research, changes in your topic and how to limit the investigation, patience, etc.

>>> continues

## >>> 38<sup>TH</sup> WIM - WASTE ALUMNI MEET WASTE STUDENTS

The presentation of Ms. PEREZ SIERRA (current student) was so interesting because she explained the student situation based on the social activities and time for the studies. She described her not nice academic results in the first semester based on her multiple social activities and how she improved the grades in the second and third semester due to the time management through chronograms and planning maps.

Taking into account the information presented by the Alumni and the current student, it is important to summarize the main points mentioned by all of us:

- It is necessary to study German for increasing the opportunities and to have better options



to find a job;

- Try to find a HIWI job because it is a great opportunity to learn different areas while enlarging the personal network;

- The importance to do an Internship in a company for having the experience to work in a German atmosphere and practice German language;

- Make a clear and implacable job application, taking into account the CV and emails contact in the language that you can speak very well;

- Importance to manage social and educational life together;



- Focus in the studies to get excellent grades for the next step after the Master's Thesis.

To conclude a nice evening, after two hours of presentation we met together at around 8 pm and enjoyed some salads, rice and a delicious grilled meat. Like always in the WASTE meetings which I have attended!

I hope that it was interesting for the new generations of students to have the chance to meet WASTE Alumni who shared their journeys and experiences during the master studies and the time after that.

• Cand. Ph.D. Carlos A. PACHECO BUSTOS  
WASTE alumnus generation 2007

## Life after WASTE

### 3 YEARS OF WORKING EXPERIENCE IN DEALING WITH GREEN BUILDINGS AND CERTIFICATION SYSTEMS



In January 2006, I was just in the middle of Stuttgart looking for the WASTE office. Like most of the WASTE students, it was my first time that I was abroad from home and my country. In a way I was lucky

to be a foreign country, where 18% of the foreign population has origins from Turkey, so I could easily find Turkish markets, food etc. For me, WASTE was the first experience which made the world smaller. It was realizing that although we live so far from each other we are so similar. I realize how much we improved during WASTE period. Through the enjoyable WASTE years, I got the biggest supports from my classmates. I wanna thank all of them for their friendship, for their warmness, for all of the fun. Today, we know a little bit (tradition, culture, climate etc.) from each country all around the world. This has to be learned just by living, we are so glad to live WASTE years.

After the graduation, I came back to Istanbul to look for some opportunities to work on environmental engineering. To start up my career, firstly I worked in a plastic manufacturing company. Although as environmental specialists, when we hear the word 'plastic' we just have a step backward, it was a great experience to work and implement plastic recycling systems.

Now, I am working in Turkish Green

Building Council (TGBC) as Certification Coordinator. Although, green building concept is a new topic especially in developing countries like Turkey, green buildings and green cities are direct solutions of the construction sector in order to overcome climate change. As you know, buildings are responsible for the 40% emission of the greenhouse gases. A research made in USA about the green buildings represents a decrease in the consumption rates of energy by 24-50%, CO2 emissions by 33-39%, water consumption by 40% and waste production by 70%. There are many certification systems to evaluate environmental impacts of buildings from design stage till the end of the construction stage.

The World Green Building Council (WGBC) is the center of green building knowledge, inspiration and practical support and it is a network of national green building councils in more than ninety countries, making it the world's largest international organisation influencing green building sector. With 100,000 buildings and almost 1,000,000,000 m<sup>2</sup> of green building space registered, the influence and impact of this global network is a significant force for social and environmental change.

As WGBC member, Turkish Green Building Council aims to contribute to the building industry's development by focusing on sustainability in Turkey. TGBC organizes educational programs, pilot projects with government and universities and conducts lobbying activities to



WORLD GREEN BUILDING COUNCIL

increase public awareness about the necessity of green building. I am working on national green building certification system, with the industry stakeholders, NGOs, professional chambers and academicians. Green Building Certification System focuses on reducing environmental impacts of design and construction steps. Main topics of the system are site selection, energy consumption, water consumption, land use, ecology, indoor air quality, ecological material selection, health and comfort etc. The aim of the Green Building Certification System is to provide a healthy society, an adaptable environment and an improved economy. By this way, the goal is to raise the standards of the buildings and achieve green cities. In this case, it is very important to understand the role of architects, engineers, urban planners and municipalities.

As I have been working here, I am also in contact with representatives of the green building councils all over the world. Especially in the annual meetings, I meet green building professionals from different countries, who have similar interests like me. With this international atmosphere, it reminds me our WASTE experience. I'm sure that green building sector is on the development stage for many countries and there are excellent opportunities also for WASTE people.

• Asli FIRAT  
WASTE alumni generation 2006



## APPLIED INNOVATION IN PROFESSIONAL LIFE - THE INDIAN BIOGAS ASSOCIATION

Steve Jobs once quoted, „innovation distinguishes between a leader and a follower“. In other words, we believe it is the novelty that influences above all other business traits, which stand for the success of companies like Apple. Our experience also proves -- Innovative thinking combined with practicality is a better business proposition.

Studying and working in Europe provided the food for thought for us to represent ourselves as environmental entrepreneurs by implementing renewable energy based business models in India. Undoubtedly, „Land der Ideen“ systematic structure to opt for a solution based approach gave us enough exposure and training to confront the different faces of business life. The success of the biogas business model in Germany caught our eyes and we decided to execute similar business concept providing end to end solution in India. One of the primary challenges was social engineering, which we never fathomed earlier. Selling an existing concept in the country like ours proved to be expensive and infeasible for the poor rural people. We were, in fact, enforced to innovate and sell the same in order to sustain in the market. Lack of general awareness, inadequate governmental policies and

wrong myth associated with biogas were causing market to be stand in a dormant state.



To break the deadlock, we started building platform to educate and reach out to the biogas stakeholders - be it researcher, feedstock supplier, farmers, ministry or even an environmental enthusiastic. The starting point of our success

was the commencement of „Indian Biogas Association“. The association now serves about 4,000 odd aspirants to propagate, and exchange knowledge about biogas. Being the heads of the association helped us to rub shoulders with many other international conventions and expositions. The association in itself has become one of the

business strengthening tools for all the biogas based companies in India including ours named Arka BRENStech!!

We were the key in setting up Gobar bank projects to alleviate the problem of dung waste into green cooking fuel with bio-fertilizer. Recently we came out with a solution to the general household organic waste management problem by designing a domestic biogas plant called BioEnergyFer. The product can help urban people and rural energy poor apart from providing them an additional benefit in form of organic fertilizer. Currently, we are implementing India's first biogas upgradation project at a Sewage Treatment Plant in Jaipur. The future plan includes making a mark in solar thermal to cater the medium size industries, and setting up plastic to diesel projects.



India's father of the nation Mahatma Gandhi pointed that the villages are the backbone to country's development. However, his vision has not yet been completely realized. We are sure that with creativeness and innovation, a proper solution can be given to transform father of the nation's dream a reality.

Summarizing, innovation for us is not an option but a compulsion!

• Gaurav Kumar KEDIA  
WASTE alumnus generation 2004

## Where to go in the World?

### MOROCCO: HOLIDAY DESTINATION



Morocco, a country in the northwest of Africa and just 3-hours-flying from Germany, is an excellent destination for vacations. Although the capital city is Rabat, Morocco has other cities that have become the preferred destinations for tourists: Marrakech, Fez, Agadir, etc.

This amazing country offers very diverse and beautiful landscapes to delight your eyes, for example while you commute

between cities you can appreciate the Atlas Mountains with high and snowy peaks and at the same time, in the other side of the way, you can see the entrance to the deserted and magic area of Sahara. You can also find beautiful beaches to rest and to enjoy the sun in cities like Agadir that are bathed by the waves of the Atlantic Ocean.

When you visit Morocco you cannot miss the experience of riding camels (activity not very liked by men... ask them why not), spent one night at the Sahara, take a glance at the scorpions or going to the markets in Marrakech where rainbows of colors, spice-market smell and an urban orchestra of sounds show you the real Moroccan culture.

Travelling to Morocco is easy, despite of the fact that the official spoken languages are Arabic and French almost all the people can talk to you in your mother tongue, no matter which one it is! So it is very easy to communicate there.

Once there be sure to try their special

mint tea, the dates and other dried fruits; the local food like Tagin and Couscous which have the special touch given by cumin, the most important spice in Moroccan cooking.

If you decide to spend some days in an exotic destination, do not hesitate on choosing Morocco!

• Natalia Andrea RESTREPO VELEZ  
WASTE student generation 2012



## WHY NOT AFRICA?



Besides studying abroad, the biggest motivation of foreigners (Latin's especially) for coming to Germany is the opportunity to travel around Europe, because it's cheap, it's easy and everybody will ask you if you have already visited Spain, France, the Netherlands, Italy, Greece or Eastern Europe. But why not going abroad from Europe? Germany is strategically located in Western Central Europe and this makes it attractive for several destinations.



When I was a teenager, I dreamed to visit Africa. I started to study Environmental Engineering in Colombia and the idea that in Kenya was the headquarter of UNEP (United Nations Environment Programme) made me dream to work there some day. Furthermore, most of the Disco-

very Channel and National Geographic programmes were taken in Africa! Vast savannahs, full of lions, hyenas, elephants, giraffes and wild boars, big lakes with a pink layer of flamingos and large scale migrations of thousands, even millions of wildebeest were the images during my childhood that I always thought they will be just on my TV.

Nevertheless in June 2012, when I was planning my end of year holidays to „somewhere“ in Europe, there was an opportunity with a friend to go to Tanzania – Sub-Saharan Africa. For me, was like a crazy offer but when I started to figure out costs and all the things that I would do in 17 days I did not hesitate in saying: **YES**. It was absolutely **AMAZING** and the best journey I have made in my life. A dream came true and when I was in the middle of a savannah surrounded by zebras, giraffes and lions, all of them without even noticing that I was part of the place, it made me feel grateful to be there. The experience to see, feel and hear the wildness of the nature life and the feeling of rejection against activities like the illegal trade of rhino horn, elephants ivory teeth or fur products. Simply a magical place. Incredible landscape, great weather, many options for tourists, delicious food, beautiful beaches and lovely people.

I cannot describe in a few words what I saw and felt, but I just would like to make people think about other experience options. The most valuable learning abroad is



not the knowledge and preparation that we get during our studies, but the experiences that we will live with different people, in different countries, with different cultures, and those experiences that make us say that the life is now and there's no time to wait for making dreams true.

• Maria Jose VILLALOBOS  
WASTE student generation 2011



## WASTE NEWS

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## BEING ROBBED IN ROME

Visiting Rome, the „Eternal City“, is a dream for many people because there you can find modern and old, past and present side by side, everywhere. Recently I was making this dream come true and I spent some days there but unfortunately I was robbed in one of the metro stations. It is a pity that such a magic city has the disgrace of burglars. I had to modify my schedule and include some visits to the police office and to the Metro's office, where I could find some helpful information about what to do in this case. It is very important to report the event. In that way it is possible to get back your documents if the burglar decides just to take the cash and leaves your things somewhere inside the station (which happens often). This could also happen to you,

so when you visit Rome take the proper measures to not lose your documents or your money and in that way you will enjoy the city more.

• Natalia Andrea RESTREPO VELEZ  
WASTE student generation 2012

