

## Zero Waste Italy (ZWI) & Friends of Nature (FON)

### Report on EU-China NGO Twinning program

Marta Ferri, Zero Waste Italy, Italy

Lin Youzhu, Friends of Nature, Beijing

*Both exchanging organizations ZWI and FON have been cooperating on a joint project focused on solid waste management in urban context, the spreading of sustainable strategies (Zero Waste) and practices, the rise of sustainable businesses and environmental education among population in both the Italian and Chinese context. Within the mentioned project we were aiming to investigate both problematic situations and actions toward sustainability, with focus on sustainable businesses as well as e-waste treatment. Through this exchange we managed to fruitfully exchange and share knowledge and practices about technologies and system related to the management and the treatment of waste and local resources, understood as a way to stop the climate change and improve communities life-quality, also in terms of collective empowerment.*

### Marta Ferri, Zero Waste Italy, Italy

Between September 5th and October 11th 2015, I was visiting our partner organization Friends of Nature in Beijing, China, for a collaboration as part of the EU-China NGO-Twinning-Program.

#### **Introduction – Objective of the exchange**

Zero Waste Italy has always been interested in understanding the Chinese waste issues, practices and movements/organizations related to that. The focus of my visiting period at FON has been the urban solid waste management in Beijing, their e-waste treatment and FON's communication and working strategies.

All my main aims and focuses have been analyzed and discussed deeply with my exchange partner, Lin Youzhu (Ginny) and her organization. This exchange also helped my association to start an analysis about e-waste treatment, trade and management in Italy, especially its connection with the e-waste trade in China. Plus, we think it to be useful to continue a collaboration with FON not only for its work in Beijing but also because its great contribution in building up the Zero Waste China Alliance, making this organization a perfect bridge in creating collaboration for the spreading of sustainable and low carbon strategies.

The exchange met my expectation and I consider the entire experience as very positive for ZWI in terms of sharing knowledge and expertise and the improvement of the international networking with organizations operating in the same area as ZWI.

## **Main activities and products of the exchange**

The exchange was divided into two periods, the first one being FON' annual international field trip (to Taiwan). The second period is based on the activities and field research, conducted in Beijing area, focused on analyzing the solid waste management and treatment systems and to the rising of economic and educational platforms promoting "good" practices.

### **Urban solid waste management in Beijing. Understanding the "waste road", between regular and informal services.**

The main part of the exchange has been spent in Beijing. Through the collaboration with FON and the fundamental figure of Ginny as my twinner, I could conduct field researches, interviews and document analysis in the attempt to have the clearest possible perspective of the solid waste management and treatment in the Beijing urban context. Particularly, the fieldwork has determined an important phase of the exchange, helping me and FON in understanding the "shadow-side" of the waste management in the capital. Furthermore, I could enhance one of the exchange key-focus: the e-waste management and treatment.

Eventually, the last part of the exchange has been dedicated to visit some of the "good practices" businesses and educational platforms in Beijing, giving me the opportunity to talk and interview with the main characters of these experiences.

### **Municipal waste service in Beijing**

The waste issue in China has been one of the most discussed topics in the last period. Being one of the greatest industrial power and the most populated country in the world, the consumption and production habits generating a high quantity of waste, attracts the attention of various organizations working towards environmental issues. Meanwhile, Chinese NGOs are working towards the promotion of good practices and alternatives in terms of waste and energy management and consumption-production trends.

*Friends of Nature* is the most popular organization working in Beijing on this topic, having developed a research department about it, their "Urban Solid Waste Management" section.

This department focuses on the promotion of education on waste separation and management, working on the reduction of the generation of waste in the civic society

Officially, every community in Beijing is served by a daily separate collection service. This means that in every house there are three bins: recyclables (paper and cardboard, plastic and glass bottles, cans), "food waste" and "others" (all the rest, including e-waste).

However, according to Friends of Nature, Ginny and my field researches, this is not the reality: only central communities have this service (and it is not daily), while peripheral communities often have only "others" bins. The poorest communities (the ones closest to the countryside) often don't have bins at all, creating illegal landfills of various dimension and danger.

The official system of waste management and treatment faces several difficulties: in fact, according to a new governmental policy which cuts the majority of funding devolved to recycling and composting platforms, many of these centers closed or moved to other

provinces. According to FON and other environmentalist organizations, the new governmental trend seems to prefer and subsidize incineration: the majority of food waste, all the “Others” and some of the recyclables are actually burnt or put in landfills. Plus, in the name of an approaching “waste emergency” the local government approved the construction of 5 more incineration plants.

We had the chance to visit the newest incineration plant just opened to public, in the Lujishan territory. This is meant as the first platform of a so called “circular economy district”, in which the company Beijing Shougang wants to build other 11 construct, all devolved to the conversion and recycling of materials through burning practices. This incinerator will burn 300 tons per day and it will serve Beijing and the closest villages, and, according to our guide, it is so high tech that it doesn't emanate any fumes or emission, only water vapor.

The modern design, the environmental education path inside the building – meant for schools -, the idea of circular economy denoted how concepts like “sustainability” and “circular economy” itself are often used in a twisted way, in what could be called a “green washing attempt” of popular polluting industries, such incineration plants.

This experience helped both me and Ginny to understand how easy it is to influence the population and the political leadership with “green” terminology to cover polluting industries. In order to avoid this, we agreed that being part of an international environmentalist network could help in order to properly address expertise and know how related to the promotion of sustainability in a proper way.

### **The Informal waste service**

In Beijing there are many tons of waste left over by the governmental service. As mentioned, the urban Chinese consumption habits have generated thousands of tons of waste every day in the capital city. According to FON and Ginny and my fieldwork, all the recyclables, the food waste and even electronic and high tech devices of different sizes are collected separately every day from households, business activities, schools, offices etc. by the so called “small dealers”.

Mainly coming from Henan Province they collect waste, community by community, according to an informal weekly calendar. All the materials collected are then sold to the “sellers” in the waste transfer centers, informal spaces you can find in the city center as well as in the periphery. Metals, e-waste, plastics, glass and cans, paper and cardboard are separated and stored in a specific space of the center, and for each of them there is a seller in charge, who usually lives in the center with his/her family. When a waste transfer center gets important dimension – and, thus, many families live there -, this can be called a “waste transfer village”.

In the last period, the local government is clearly following a strict policy against this kind of center and especially against the waste transfer villages. According to FON, the official reason is that those kinds of illegal spaces, not regulated by any official law, are dangerous for the environment and for the population, since these activities are based on shadow market agreements. This tendency could be explained by the Beijing government interest in improving incineration plants capacity: if the informal waste market no longer exists, what

about all the waste? Burning it is seen a proper solution for the Beijing municipality.

### **The food waste issue**

Food waste is another important issue in China as well as in Beijing.

In the informal system, kitchen waste from restaurants and diners is usually daily collected and minced by the small dealers specialized in the trade of food waste residues. They usually are farmers from the countryside processing food waste into high quality compost, since the one available from by the government is considered sub-standard.

Food waste from households is not sold to any small dealers because of the small quantities. Reusing coffee grounds for composting and cooking with food waste is becoming fashionable for wealthy people, but they are not very popular among the lower income class, which represent the majority of the population of the capital.

### **The e-waste road**

UNEP has individuated in China the second largest e-waste producer (the first one are the United States of America) and the leader in treating e-waste in the world: every day, tons of high tech devices are collected and treated, especially by the informal system.

80% of the world wide e-waste is treated in China. It mainly comes from Europe, North America and Africa.

Guangdong Province, is the leader of informal service in treating e-waste: the images of entire families living and working in the so called “e-waste villages” in the city of Guiyu became world-famous a few years ago, but there are few studies on these places. In this context everyone has a kind of informal expertise in disassembling and collecting precious materials. Despite the majority of these activities not being safe for the person and very dangerous for the environment (such as melting hardcore down to collect the gold from the waves), many people live and work like this in China today. The lack of interest of policy makers and the absence of a real regulation about the trade and treatment of e-waste are also contributing highly in polluting the Chinese environment and the people's health.

I had the chance to visit several small e-waste villages in Beijing, the ones who survived – so far – to the government's reclamation. They are organized in the same way as the waste transfer centers: every item is disassembled and each material is categorized and stored in an specific place, waiting for being sold and shipped to a recycling center.

Small dealers can also collect broken electronic devices from private households, offices, schools etc. and sell them to a second hand market, making a double profit in selling the item still working and selling it again when it is broken to an e-waste center.

### **Conclusion**

The informal system of waste management seems to represent an efficient alternative to the governmental one, which demonstrates large difficulties.

Although, at the same time, the irregular system represent a strong rival for regular businesses, having lower prices and, thus, more clients among the recycling centers from

other provinces. Another strength of the irregular system: It is a useful structure in the population's daily life: without this, apparently, Beijing would be covered in waste. It seems that even the government takes in high consideration the illegal system: in fact, many regular waste platforms still working need to have governmental subsidies in order to keep the price as low as the irregular waste market.

According to Beijing environmental activists working on these issues, this situation is due to the lack of a strong governmental legislation about waste trading: regular recycling centers can buy materials from both informal and official businesses without many problems.

It seems that the strength of the shadow market is based on a kind of governmental approval: in fact, waste transfer centers are dismantled only if working against the government's interests.

### **The “good” practices in action. Sustainable businesses, environmental education and research in Beijing**

The “waste road” in Beijing is not only about shadow markets and incineration. There are several activities and initiatives promoted by citizens and supported by local NGOs (like FON) working towards sustainability.

#### **The “Banana Skin” e-waste center**

Despite the local government tendency to move recycling centers away, in the last year it has been decided to finance a platform for disassembling electronic and high technological waste. The Huaxin Environmental Protection Development Co., Ltd., usually called by Beijing people simply “Banana Skin”, is based in the Huaxin district. I had the chance to visit it as part of a private guided tour organized by FON.

The Banana Skin is based on two parallel projects. The first one is about environmental education to sustainability, having as main aim the promotion of “good” practices in categorizing waste. They work in schools and communities in the capital.

The second project is the center itself: in the factory, workers categorize, disassemble and, again, separate all the different materials composing the e-waste. These are coming from offices and schools, usually, but private citizens, too, can bring their own old electronic devices here. Although Banana Skin usually receives e-waste directly, sometimes they also interact with some trusted small dealers. All the procedures that bring e-waste to the Banana Skin and from there to recycling centers is as transparent as possible: in fact, this platform wants to demonstrate that it is possible manage waste in an efficient, scientific and safe way, concurring with the informal market also in terms of prices.

#### **FEPA, the Fashion Environmental Protection Alliance.**

The shop FEPA (Fashion Environmental Protection Alliance) is the first example of a structured shop based on short-chain production in the capital. But the real innovation is not about selling rice, vegetables and fruits from the Beijing surroundings, but the fact that private citizens can bring in their kitchen waste for discounts and even get fresh vegetables in exchange. The collected kitchen waste is then sent (for free) to a network of farmers living close to Beijing: they use the organics to make high quality compost for their fields. These

are the same farmers producing some of the goods sold in the FEPA shop. The idea became so popular and works so well that the local government offered (small) funding to Shian Qiao and her husband asking them to open more shops like that.

### **Aurora International Academy**

The Aurora International Academy is a multilingual private institute inclusive of kindergarten and primary school. Funded in 2014, its main aim is to promote an academic and social education connected to the promotion of sustainability, both in terms of daily life practices and environmental education. In every room of the school there are four bins for the separate collection of waste, but the main aim of the teachers is to teach children how to reduce the quantity of materials used and to reuse them – Art class is often about artistic reuse -. They separate paper and cardboard, plastic, can and glass, organic; but in the kitchen area, there are two bins for organic waste: one for raw material and one for cooked items. In this way they can use the organics already separated to create their own compost, useful for the garden in the courtyard. About the others waste streams, they are sent to certified platforms, like the Banana Skin center.

The main purpose of the Aurora International Academy is to promote sustainability practices as something closely related to the Chinese tradition, re-discovered through the History class connected to all the other subjects. This is understood as therapy for the living present afflicted by pollution and waste emergency.

This school, despite being only the beginning of its path, determines a first and noticeable example of a structured education towards sustainability in the Beijing context.

### **Lecture in Sanlitun**

As part of the exchange activities Ginny and I decided to organize a public lecture about sustainable strategies in urban living and waste management, focused on the Zero Waste strategy (which both our organizations support) and, in particular, the Zero Waste Europe's and Zero Waste Italy's experience.

The lecture, meant as environmental education action, has been useful for several reasons. First of all it helped promote the construction of the Zero Waste China Alliance, seen as bridge to connect the Chinese organizations operating in the field of waste and community management each others and with a wider international network.

Secondly, it has been a good opportunity to create a public debate about Beijing waste and resources and, furthermore, a discussion among citizens, small entrepreneurs and NGO workers about possible sustainable strategies applicable to the community management.

Third, this public lecture also has been meaningful in order to create a space of meeting and network among privates and professionals with similar ideas and perspectives, which had the chance to share different knowledge, expertise and know how about the discussed topics.

### **Meeting with Nature University's representatives**

During my staying in Beijing I had the opportunity to have a meeting with Mao Da (also member of the international Zero Waste network, GAIA – Global Alliance for Incineration Alternatives) and other activists part of the Nature University (Nature University participated

in the Twinning program in 2014). This meeting helped me understand better the environmental situation in Beijing (and China in general) in terms of legal and grassroots actions against incineration, landfills and towards the increasing of a participate governance in environmental problems. Moreover, Mao Da highlighted a system of “active protest” that involves both the citizenship and experts in fighting the pollution in a territory: one of the main aim of the Nature University is to create a “precedent”, a community having won a fight against pollution (like incineration) to use as precedent to conduct similar environmental battles. In order to do so, it is fundamental to investigate and conduct scientific analyses that can demonstrate the toxicity of a community's territory to the government that, ideally, should act in order to solve the situation towards the well-being of the population. This process could also enhance the civic participation to the governance of a land, improving also the sense of attachment and identity to its resources.

### **The Zero Waste China Alliance**

Friends of Nature, together with the Nature University - and other Chinese organizations - are collaborating with GAIA and the Zero Waste International Alliance in order to activate the Zero Waste China Alliance network. The main aim of this network is the promotion of the best practices towards the creation of sustainable systems in urban context (working mostly at a “community level”), rural areas and trying to involve the political class, industrialists and entrepreneurs in this project, working on practical and local projects (which most of the Chinese organizations are already doing)– but still under the international umbrella of Zero Waste.

The consumption behavior of the Chinese population and the consequently high rates of waste combined with the poor waste management in China made the Chinese activists decide to become part of the Zero Waste network to work in communities and schools towards a raising of awareness about the separation of waste and reuse activities.

At the same time, there is an increasing effort by many organizations to hold dialogues with industries about the use of excessive packaging: the main aim is to find a deal that can contribute to decrease the use of plastics and cardboard.

Another important goal Zero Waste China Alliance is working on is an attempt to change some aspects of the current local and national legislation about the management of the territory, in terms of natural resources, waste, industrial production and monitoring of environmental pollution.

### **Benefits and effects of the exchange**

Through my exchange from Europe to China I was able to obtain an increased knowledge on the Chinese context – specifically, the Beijing one – in terms of social-environmental actions and fights. This is important for Zero Waste Italy's mission, because we consider China as an interesting context of work in terms of promotion of sustainable alternatives related to waste management, industrial development and people education and awareness about these themes.

In this way, we could successfully share expertise, know how and knowledge about our



topics of interest and actions which, despite the different background of action, are very similar.

### **Strengthening effects for Zero Waste Italy**

For ZWI this was the opportunity to improve our network in the Asia-pacific region, often perceived very far and not relevant in Italian matters. With this exchange, Zero Waste Italy could demonstrate the contrary: not only is China deeply involved in our waste management – through the international trade of waste, often illegal – but there are several competent and motivated NGOs working towards our joint mission: the promotion of sustainability. Meeting this many NGO workers with the same our civic passion, really motivated and moved us to improve the network with them. We believe important maintaining contact with both Friends of Nature and Nature University, possible also thanks to their involvement in the creation of the Zero Waste China Alliance.

Plus, this exchange raised additional ideas and expertise, especially in terms of sustainability business activities: this topic is developing in Italy (and in Europe in general) and thanks to Friends of Nature contacts, I could see how sustainable businesses are rising also in Beijing.

### **Long-term partnership with Chinese NGOs**

Thanks to the engagement of Friends of Nature and Nature University (together with other organizations, like Wu Wu Center) for the construction of the Zero Waste China Alliance, we are planning to continue a long-term partnership with them. The participation of China in the international Zero Waste network is understood as an important step in the global answer to the climate changes and the environmental problems affecting local and national communities.

Zero Waste Italy believes the relations with these organizations are very valuable. We would like to improve our network with the proposition of more joint projects still based on waste management and the civic society, focusing on a new aspect: the sustainable businesses in Beijing, in order to understand and help the diffusion and the effects of “good” practices in Chinese society. In fact, an interesting future joint project could be the promotion of connection between Italian and Beijing sustainable businesses working on reducing or managing waste, through FON's collaboration and network. This could be important in order to improve and exchange knowledge and expertise between the Italian and Chinese contexts on specific topics related to the mission of both: rising awareness and promote sustainability in the daily life of the population as fundamental action in the attempting to change consumption-production habits in both our societies.

## **Lin Youzhu, Friends of Nature, Beijing**

Lin Youzhu visited the Zero Waste Italy in Lucca from October 20th - December 10<sup>th</sup> 2015.

### **Objectives of the exchange**

The objectives of my stay with ZWI was mainly to conduct research and collaboration about the urban solid waste management in communities.



We also performed investigations of both problematic situations and actions toward sustainability with a focus on e-waste, recyclables, food waste and best practices.

### **Exchange activities**

#### **Meeting with the mayor of Capannori, the first community to declare Zero Waste in Italy**

I learnt a lot about the efforts a government has to make in a best zero waste practice and how they managed to do it, their plans, difficulties and so on. I also established a good relationship with Capannori's minister of waste management, who plans to exchange more experiences with China.

#### **Meetings with the Zero Waste research Center's team and start[ups they are supporting, such as Hacking Club and the Soap Lab.**

It's been a great chance to learn what they do as I have never heard of people doing similar things in China. Their working methods, achievements and efficiency are very worth learning for Chinese people, I will share through lots of means of what I learnt.

#### **Visit the start up "Fungi Espresso" that recycles coffee ground to grow nutritious mushrooms in households**

I found this such an impressive visit, it extremely broadened my mind and it is a project always interesting to share with the public.

#### **Visit the three re-use centers of the association "Daccapo" and Visit of eco-islands**

With these visits I finally understood the secret of a "zero waste community", the whole system is very well organized with complementary parts. It's the core of Italian zero waste practices, now I'm putting the case in textbooks and lecture materials, also in policy suggestions in the following days.

#### **Visit of school project**

I myself am doing a lot school projects, I learnt that European and Chinese schools do have a lot in common, we have a good chance to collaborate.

#### **Presentation on Chinese movements against incineration in Florence with local activists**

The activists group "Mamme no inceneritore" is an incredible example of self-organized social group, I learnt more than I shared with them. We would like to organize some joint event against incineration.

Other visits that equipped me with more knowledge of what European countries are doing and which China can possibly follow:

- Visit at the start up shop "Effecorta", selling *km0* products (short chain production) and its zero waste restaurant. Understood the real meaning of "short chain" and its advantages.
- Guided-tour by Contarina SpA in the territory about good practices.
- Milan as excellent example in terms of composting practices and

door-to-door separate collection.

- Meetings with the municipality administration in order to better understand the waste management system.
- Visit zero waste hotel: Conca Park.
- Investigate on Munich's waste and E-waste recycling system, visit Con-Job recycling factory and Saturn E-waste.
- Visit Zero plastic store in Munich: Plastikfreie Zone.
- Visit Zero packaging store in Berlin: Original Unverpackt.
- Meet up with partners: meeting with Zero Waste Europe in Brussels, BftW(brot) in Berlin, etc.

### **How has the exchange strengthened the participating organizations?**

1. First of all, many of our projects has benefitted a lot from the exchange, e.g. stories of the best practices I have brought back are put into our lecture materials; case studies are enriched in the course book that we are compiling; EU and European country's policies that I learnt are also conveyed and written into our policy suggestions on the 13<sup>th</sup> five-year-plan and the two sessions (NPC & CPPCC).
2. The investigation on e-waste we did together in China was fruitful, we are thinking of how to make the best use of the results.
3. We are very much inspired by many of the practices I visited or learnt, with these good examples we are changing and developing our working methods in communities and schools.

### **Plans for future collaboration**

1. In October, 2016, we will invite Dr. Paul Connet and another guest from Europe (very likely to be Matteo Francesconi, the Capannori's minister of waste management) to share on zero-waste strategies.
2. FON and Zero waste Italy will continuously share each other's experiences, work plans and ideas; we will also arrange meetings and invite Mr. Rossano, Mama against incineration to share their ideas and experiences in the near future.

### **Networking effects of the exchange**

During the exchange got in contact with more than 20 NGOs during the exchange period: 4 Italian NGOs, 3 French, 1 German, 1 Belgium, and about 15 NGOs from the GAIA's 5-day global meeting in Paris. These are the NGOs that were involved deeply in our discussions on many topics, or doing similar projects. We are still in touch after going back to China to exchange on what we are doing and learn from each other. I strongly believe that in the future we will somehow collaborate.

### **My personal impressions and experience**

I personally benefited greatly from the exchange, it not only broadened my mind and established friendships but I also equipped myself with better survival and self managing

skills. It's a great chance to catch up with what European countries are doing, showing me different sides of waste management in Europe. I also find the very different administrative and social systems have led to great differences in Chinese and European NGOs' actions. Carefully comparing these differences in legislation, people's awareness and waste management system will be a good point to make policy suggestions, to gradually make the Chinese government aware of the core principles and good practice of Zero Waste as a key strategy towards a sustainable society, thus force them to promote a better waste system.