COMPASS context Analysis Sustainable Site Conversion

Compass Partnership

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Erasmus+


COMPASS

Contents

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Introduction

The information in the following report edited by the Bulgarian Development Agency has been collected by the partner consortium of project COMPASS, as follows:

Italy- A Sud Ecologia e Cooperazione ONLUS, Ce.S.F.Or. Centro Studi Formazione Orientamento;

Croatia- DOOR - Society for Sustainable Development Design;

Germany- EUROPANORAT Beratung, Training, Management, Consulting GmbH;

Romania- Civitas Foundation for Civil Society;

Bulgaria- Bulgarian Development Agency;

The Compass project wants to contribute to building fair, socially and environmentally sustainable societies through the development of a new professional curricula and a training course in the field of ecological conversion of public spaces. The project, based in 5 european countries includes activities of context analysis, dialogue with stakeholders, professional training and collaborative project ideas' development with local authorities to enhance participative and ecological conversion processes throughout Europe.

The main task of the report is to present the current situation of the sustainable conversion sector in five European countries. It reviews in particular sector development trend, occupational perspectives, education/training needs in this sector (supply/demand).

The data has been collected through a series of surveys and desk researches, in order to build a holistic picture, regarding the sustainable conversion and its future perspectives. An important source of information for this report was the survey realised in all the partner countries directed at various stakeholders like local authorities, companies, civil society organizations, university professors and experts.

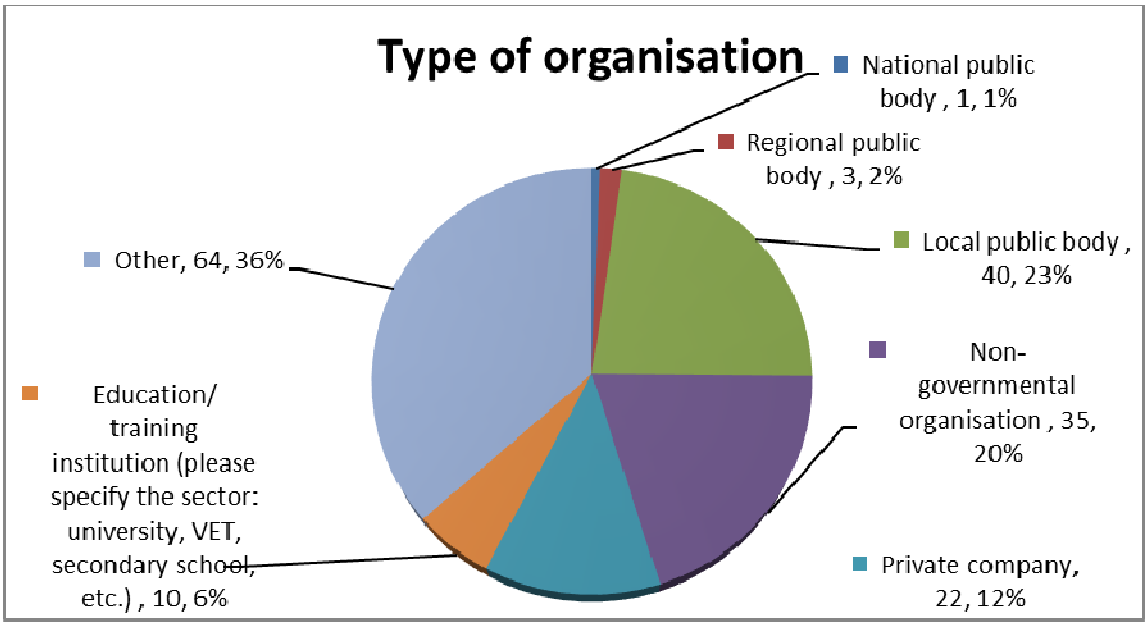


Figure 1: type of organisations represented by stakeholders participating in the survey

We have collected 114 responses Croatia, Italy, Germany, Romania and Bulgaria. Interviewed stakeholders have shared their information and opinion regarding the aspects of the conversion sector in terms of its main trends and paths of development.

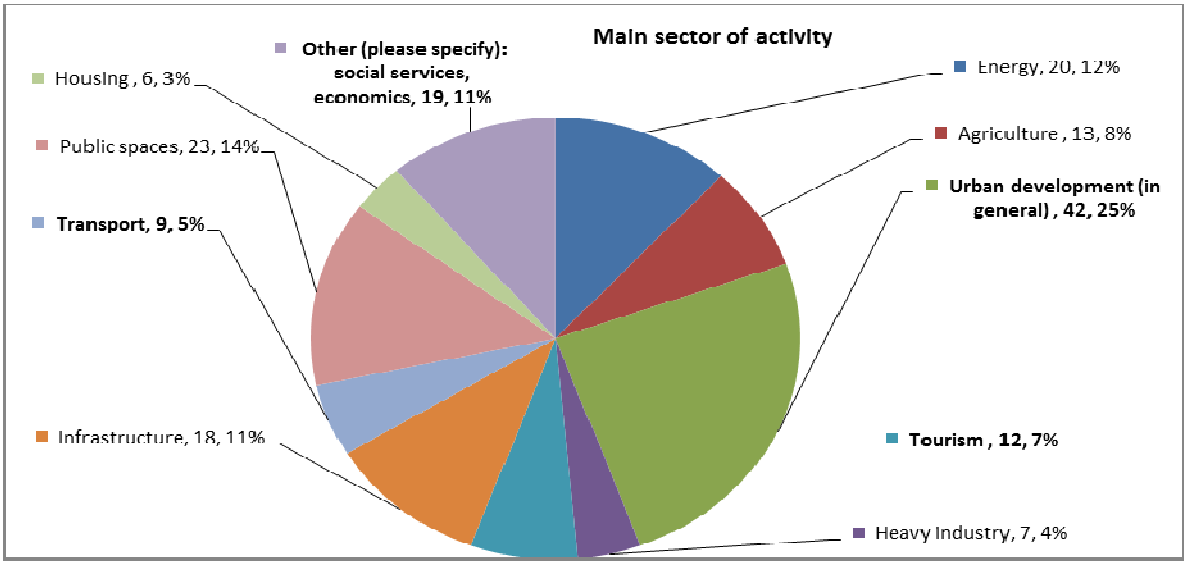
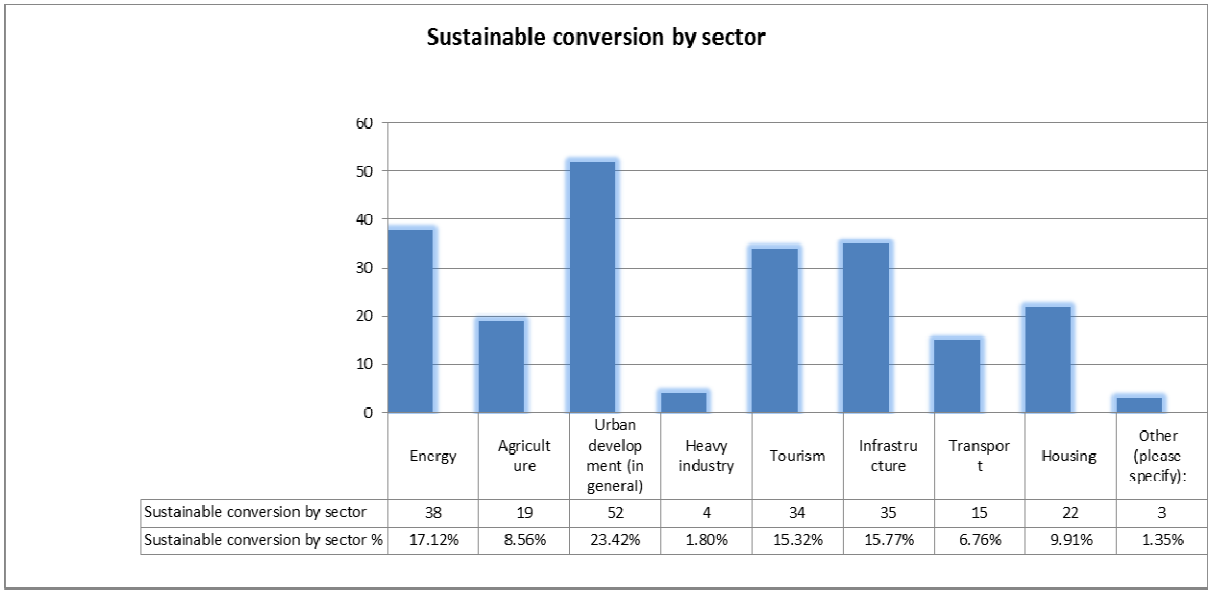


Figure 2: sectors represented by interviewed stakeholders

I. Sector development trend studies

Before showing the sector development trend study results per country, the following graphic illustrates the sectors in which interviewees identified major actions toward sustainable conversion in their country :



	Energy	Agriculture	Urban development (in general)	Heavy industry	Tourism	Infrastructure	Transport	Housing	Other (please specify):
Sustainable conversion by sector	38	19	52	4	34	35	15	22	3
Sustainable conversion by sector %	17.12%	8.56%	23.42%	1.80%	15.32%	15.77%	6.76%	9.91%	1.35%

Figure 3: major actions toward sustainable conversion identified by interviewees in their country

The most frequent areas where the sustainable conversion is put into action are the energy and the urban development sectors. In all of the sectors the main challenge point out were lack of financial as well as human resources.

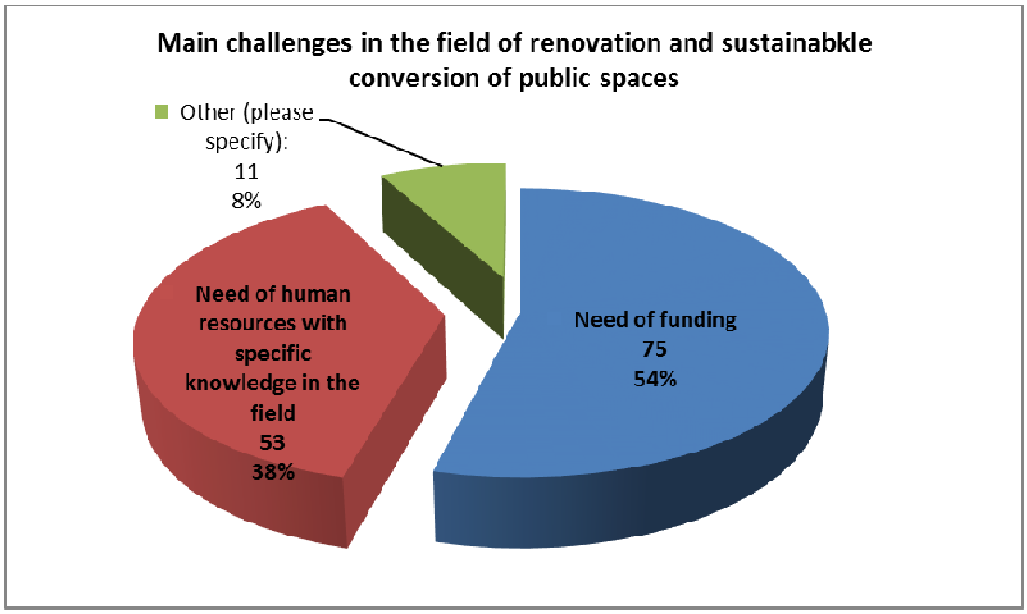


Figure 4: main challenges in the sustainable conversion sector as identified by interviewees

Moreover, interviewees identified Local authorities and European Institutions as the main source of funding for sustainable conversion actions.

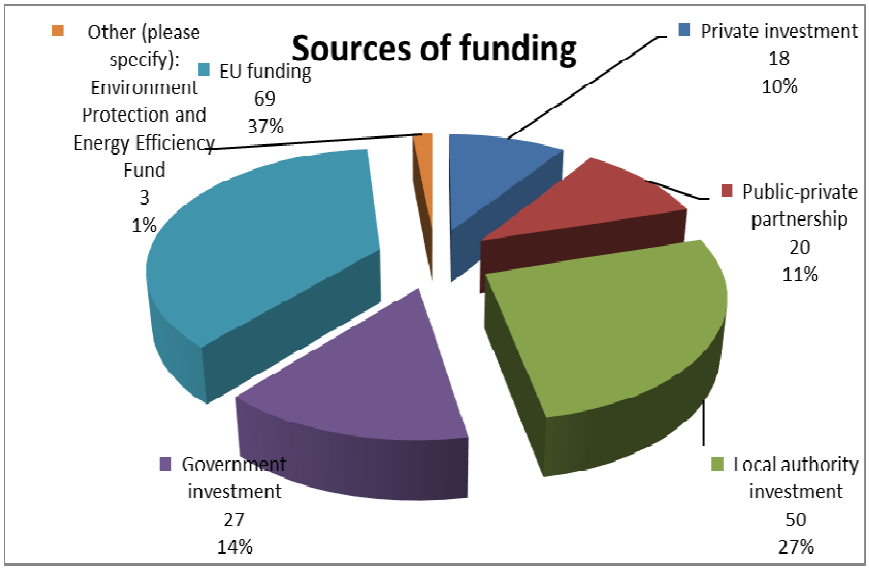


Figure 5: Main source of fundings for sustainable conversion actions as identified by interviewees

A. Sector development trend study in Italy

1. Overview of the conversion sector in Italy

The idea of an "ecological conversion" - a term introduced in 1984 in the public debate by Alex Langer - is becoming a key aspect and a possible solution to deal with the crisis that we are facing. Ecological conversion is a term that has a subjective side, ethical and personal and an objective side, social and structural. It refers primarily to the change of our lifestyles, our way of consuming, the way we work and the purpose for which we would like to work, our relationship with others and with the environment. The "conversion" is environmentally friendly because it takes into account the limits of our environment: limits which are essentially temporal; either because they deal with the fact that we are mortal beings and we are living in a world that will last also after our death, and for this reason they reach the deepest core of our existence; both because they remind us that we cannot consume in a given time more than what nature is able to produce; nor pollute the environment more than it can regenerate.

The ecological conversion today requires the identification of new economic models and define new sector in the labor market.

The so-called green economy thus becomes not only a scenario of transition, innovation and development of technology and skills but a real opportunity to overcome the crisis.

To be effective the ecological conversion has to deal with two issues: on one hand it has to address the structural conversion of the productive system to reduce the over exploitation of natural resources (produce less and better, use less materials; use longer the products and waste less as well as recovering everything that has been discarded) and, above all, to reduce the exploitation of the human being, animals and ecosystems living on the Earth. On the other

hand, the conversion involves the change of our lifestyle, through the reduction of our consumption and a change in the way of consuming fostering models that improve local production and social relations. In this process there is the need to activate a double process: top-down and bottom-up.

From the top, it is necessary to raise awareness of local and national governments on a different industrial policy: promoting an organic plan able to guide economic activities towards sustainable products and technologies as well as fair production systems respectful of workers dignity. There is the need of effective policies created to rule in details the production system, what to produce, how to produce it, with what, to whom, and even where. But a so deep change can be achieved only by having a bottom-up approach and promoting a wider participation of the population involved: those working in the enterprises to be converted, and those who suffer the impacts in terms of environmental damage and social transformations caused by those companies.

To achieve a real and structured change we have to foster the engagement and the participation of the civic society, the institutions and private enterprises that work in the same territory.

It is important to recover and diffuse the knowhow held by the members of the community and to involve other companies and other communities, to cooperate organizing support programs and claims at national or European level.

In the challenge of choosing new productions we will have to give priority to those that have a potential market, that are somehow “safe”, goods that will become essential as the effects of the environmental crisis will be more evident. An example are the systems for the exploitation of renewable energy sources; solutions to promote energy efficiency; vehicles to be shared; sustainable governance and mobility systems; 100% recycling systems; know-how and tools for the preservation and re-naturalization of the territory; ecological farming systems that employ skilled workers and technology; projects aimed at recovering old or abandoned buildings and guarantee the energy efficiency; create laboratories to improve technical skills in

extending the life of products with maintenance and repair; etc. But in order to launch these new products we have to secure their market. This can only be done involving the community, or a larger set of communities, and their local governments.

The ecological conversion is mainly a process of restoring the economic relations through the re-establishment of a direct relation between producers and consumers, fostering the transparency and allowing the public control of the transactions process.

The direction of this change is clear: we are passing from a world dominated by the concentration of power, large financial groups and big businesses, to a system of powers, industrial plants, business, activities, widespread, differentiated, adapted to the local characteristics and communities, but not isolated from each other, as connected by a shared knowledge, made available by the world wide education and the potential of telecommunications networks.

This report will try to give an overview of the field of ecological conversion in our country, analyzing the regulatory, social and employment perspectives and the challenges we are facing. It will also describe some experiences and best practices developed in the country and at regional levels.

2. Existing policies and legislation for conversion sector

2.1 National strategy, plans and other approved documents covering the conversion sector

The measures currently under discussion in the Italian parliament concerning the legislative decree connected to the Stability Law "Environmental provisions to promote green economy and measures to contain the excessive use of natural resources"1, that transposes the European directives on key environmental issues, are an important reference framework which must be taken into account in addressing the conversion processes.

These include rules aimed at restricting the use of dangerous substances in order to protect the health and the environment, which require important actions of recycling and disposal of their waste. Those are sectors that could contribute in developing jobs and the industrial conversion of some production sites.

Also for what concern the industrial emissions our country seems to be delayed, as the laws necessary to comply with the provisions of European Directive2 should have been implemented by the 7th of January 2013 and are now under examination.

The incorporation of the European directives in our regulation system certainly comes late, but it is looking in the right direction. The new rules indicate the requirements and sanctions in case of violation of the law; but in order to give a broader programming perspective it is important to bind them to a program, which clearly indicate the direction in which we have to orient our production system and the economy, as well as the research and technology sector. In the environmental legislation currently in analysis there is no clear reference to sustainable development, to emissions reductions, use of resources that can be dangerous for the health and the environment, and to the responsible use and reuse of resources.

Combine development to environmental protection means designing a different future. If the industrialization of our country would have give (in the past) that environmental protection was a priority as to ensure the economic and productive development of the area, today we would not face real tragedies that increasingly manifest their dramatic link with the health emergency.

As an example we cite the increase in cases of leukemia in the area of Valle del Sacco (unfortunately not an isolated case in our country) due to a wide extent of environmental pollution related to the contamination of the river Sacco with toxic waste dumps of industrial origin (contamination of the water and use on farms for irrigation).

For many years the workers have been exposed to toxic substances in the workplace, in particular chemicals and asbestos. Also the people living along the river absorbed and accumulated it; firstly through organic pesticides and later through the food.

Thinking to this experience as many others in our country, it is becoming more and more important talking about industrial conversion, and link together development and eco systems protection.

A participatory process of regulation is thus a political operation that can strengthen the idea that is possible and necessary to link progress and development to a higher quality of life, food, air and water.

Today the citizenship has the possibility to have back the regulatory role of the institutions, by actively involving local communities. We should incentive the public intervention having a long term perspective, to reaffirm the social and development model outlined in our Constitution.

2.2 Laws governing the conversion sector

The ecological conversion sector in Italy does not enjoy a specific regulation but is governed by a set of rules that refers to specific conversion categories. We will illustrate some of the rules governing the conversion sector at national and regional level, as the law for the conversion of productive areas ecologically equipped, the National Action Plan for the sustainable consumption in the public administration and the innovative law proposal on social and ecological conversion presented to the Lazio Regional Council in December 2014

Productive areas ecologically equipped

The Legislative Decree. N. 112/98, the so-called "Decree Bassanini", art. 26. mentions for the first time the term "industrial areas ecologically equipped", and illustrates the general principles to which the provinces and regions should refer to legislate at local level. Local

Authorities will be the institutions entitled of identifying the areas with the infrastructure and systems suitable to ensure the protection of health, safety and the environment.

The industrial areas ecologically equipped are also characterized by forms of unitary management of the infrastructure and services and by production plants that are exempt from the acquisition of the permit covering the use of the services available.

It is worthy to stress the intention of the national legislator that entrusted to the Municipalities for the identification of these areas, first among the existing ones but also among those partially or totally abandoned areas. In this indication it can be seen the objective of the legislator to start a sort of ecological conversion of productive centres and starting right from the closest institution level.

Today nine regions over twenty-one (Piedmont, Emilia Romagna, Liguria, Tuscany, Marche, Abruzzo, Puglia, Sardinia, Calabria), have adopted laws and implemented regulations related to industrial areas ecologically equipped, which over time have increasingly taken the character and the name of Ecologically Equipped Productive Areas (APEA).

Among the various experimental initiatives involving APEAs we highlight the LIFE + ETABETA project3, which was aimed at testing solutions for eco-innovation in the operational management of APEAs.

The APEAs involved in the project's initiatives have applied a managing model based on the activation of unique management entity; a tool of preliminary analysis; and a planning model to implement interventions in specific areas to control the level of economic and environmental performance.

The project concluded in April 2013 achieved the result of creating an operative model for the implementation of the APEA, its realization within the pilot area and the experimentation of a regional and national governance system to support the APEAs. The next steps will be the

implementation of the National Register of APEA and the creation of a national and international network of APEA.

National Action Plan for the sustainable consumption in the public administration

The Green Public Procurement (GPP) is an instrument "whereby public authorities seek to procure goods, services and works with a reduced environmental impact for the entire life cycle, instead of goods, services and works with the same primary function that would otherwise be procured with a different tender procedure ". In recent years the need to integrate environmental criteria in public procurement has been linked to the possibility to integrate environmental and social criteria, which safeguard the employment opportunities, decent work, compliance with social and labour rights, social inclusion, equal opportunities and ethical trade.

Generally speaking it can be said that the definition of green public procurement has now extended to sustainable public procurement, inclusive of both the environmental aspects and social aspects of procurement (Sustainable Public Procurement).

Italy adopted the "National Action Plan for sustainable consumption of public administration" (PAN GPP), with the inter-ministerial decree of 11 April 2008, revised in April 2013.

The strategic objectives identified by the Italian legislation concerning GPP are three:

• promote efficiency and saving in the use of resources, especially energy and the consequent reduction in CO2 emissions, resulting in reduction of consumption of energy from fossil fuels, and increasing energy efficiency and use of renewables;

• reducing the use of dangerous substances, promoting goods and services whose life cycle is characterized by the absence or by the lower amount of possible dangerous substances;

• a quantitative reduction of waste products, promotion of behaviour aimed at reduce the purchase and orient it towards products with a long-lasting lifetime, easily reusable products

containing recycled materials, recyclable products, and products with a reduced volume of waste and packaging.

From the operational point of view the National Action plan for GPP has set a target of 50 % of green purchases over the total purchases (in value), to be achieved by 2014, in relation to the public administration sector.

All the public actors involved are invited to adopt GPP practices in order to facilitate the procurement of goods, services and works that have a limited impact on the environment and are not harmful for human health.

The main objective of the National Action Plan is to promote the dissemination of GPP providing general technical guidance - through the Environmental Minimum Criteria - that will allow all parties to have environmental and social criteria immediately integrated into their tender announcements.

Law proposal on the ecological and social conversion sector

The Regional Law proposal n. 227 of 1 December 2014 on "Measures for the ecological and social conversion sector" has the main objective (Article 1) of encouraging the participatory process of social and ecological conversion of economic activities in order to ensure: landscape preservation and reduction of environmental impacts throughout their entire life cycle and along the supply chains, the protection of land and rights, fair jobs and decent work as well as the rehabilitation of areas in decay or disuse for productive purposes or supply of services to the citizens, and to promote the regeneration of urban and regional spaces .

To ensure this process the law advises, in a coordinated and systematic way, how to use certain tools and resources made available by the Region in addressing social and ecological conversion.

The beneficiaries (Article 2) of these tools are small and medium-sized enterprises (less than 250 employees), individual enterprises and cooperatives , associations, non-profit organizations with social purposes, institutions that protect the commons , and - in the case of bankruptcy or situation of economic crisis - one or more workers, with the commitment to set up, within six months, forms of cooperative society in accordance with the Law 49/1985 Marcora4 .

To avoid that the objectives of the interventions provided by law remain too general the legislator has chosen to define (Article 3) what type of initiatives and interventions are qualified as having " ecological and social conversion purposes ".

The initiatives include:

• the partial or total restructuring of production lines and plant, of processes and products and of the services organization;

• the full transformation of the characteristics of the products manufactured or the services rendered;

• a change in the use of raw materials and energy from fossil fuels;

• the changes in the relationships with suppliers and buyers, maximizing the transparency of the information accompanying products sold and services rendered;

• reducing the consumption of land and the distances covered for each article or substance used and any products distributed;

• improving the quality of work done within and among suppliers, through the continuing education of employees on conversion processes;

• the rehabilitation of decayed and disused spaces to produce or supply services to citizens and promote urban regeneration and territorial spaces in the situation of decay and disuse;

• the adoption of measures, logistics, management systems and arrangements aimed at maximizing the efficient use of resources to better manage the surplus, scrap and waste resulting from production.

A key aspect of the law is the Partnership Agreement for Social and Ecological Conversion, which allows beneficiaries and institutions (the Region and the Municipalities) to prepare intervention related to the improvement, coordination, implementation and integrating resources and skills.

A key aspect of the Law is the role assigned to the "Report on the weak signals of the productive, environmental and territorial crisis", drawn up by the control agent5, which is used to detect future problems before they result into real crisis, in the supply chains, labour market, and environment; building a permanent network of "observers" of current changes, economic trends (sectorial and local) in support to the institutional intervention.

To draw up this document it will be asked the opinion of the involved actors (businesses, employers' associations, trade unions, local authorities, environmental and local groups).

This aspect of non-binding consultation of stakeholders reflects the absence, at the regional and national level of participative tools in the deliberative processes of identifying branches of territorial intervention, including production policies and land management.

Finally, through a specific section of the regional portal, it will ensure full transparency (Article 4) of the whole decision-making process leading to the definition and implementation of Partnership Agreements and the activities of the control room.

3. Funding for conversion sector

3.1 National, regional and local programmes covering activities in the conversion sector

We are now living in a historical period of transition, the crisis of the old economic model is now leading to the need of changing our approach of using natural resources.

But who should be the actors of this change?

The promoters should be first of all the institutions in collaboration with the organizations, and collectives. Firstly because the institutions can reduce uncertainties, typical of the transition phases, and secondly because they can help to better define future scenarios and remeasure costs, benefits, opportunities and risks.

Therefore in order to achieve a radical and permanent change the role of the institutions cannot be limited to amend the regulation or the current value and cognitive models of the concerned actors; it has to change the balance of the whole system, all the relevant variables, and take into account the feedback mechanisms.

Industrial and energy policies should address the principles of ecological conversion, social and environmental justice should be key elements to build a sustainable economic and social model, which promotes the redistribution of goods, equitable and rights-based.

Investing in the ecological conversion of the production system means implementing regulatory, financial and technological tools, that can support a concrete transition covering all aspects of the production cycle: from energy supply to the identification of what to produce, from the cycles of production to the supply chain, from transportation to targeting the consumers.

It means re-locating the productions in the local territory, support local economies, shorten the distance between production and consumption and helping small and medium enterprises to reduce their impact without being penalized by non-competitive production costs. It means, provide vocational training to workers, recover degraded areas for production or to provide services for the citizens, enhance the experiences of existing transition and systematize them, foster the demand of goods produced without damaging the environment.

Another consistent aspect of the ecological conversion that represent a new area for development is the urban regeneration, both public or in partnership with the private sector.

“The urban regeneration consist in implementing renovation, remediation and conversion activities of big abandoned areas, and regeneration of degraded areas avoiding to increase the land used for the new structures”.

An urban regeneration project can only be successful if it considers the regeneration of the area and not only the pure reconstruction.

The requalification of a territory has to focus on the characteristics and potential of the social fabric of the area: the local identity, the social activities that are developed in the area and the resources of the inhabitants. Therefore the regeneration has to be addressed to the people and not to the space.

Torino’s special project for suburbs

An example of good practice concerning the engagement of local government in the regeneration of public areas is the project developed by City of Torino.

The Municipality of Torino become aware that was necessary to rethink the role and shape of the peripheries, in 1997 it decided to create the Special Project for Suburbs, the first project in Italy aimed at developing integrated and participated intervention in “difficult” neighborhoods.

In 2004, only six years later, it was possible to count more than 100 “best practices” realized in the peripheries of Turin.

The best example is the project implemented in the neighborhoods of Mirafiori, created close to the well-known Fiat plant and aimed at hosting the workers and their families. An area of 2 million square meters with a population of 25 thousand inhabitants. The regeneration project promoted by the Municipality was financed by the EU programme Urban2. The rehabilitation

of Mirafiori consisted in different integrated actions, like the creation of a big urban park, the realization of reference center in the heart of the neighborhood, intervention to achieve the economic development of the area, support to local entrepreneurs, technological innovation and local development. This project has been selected by the EU among the 10 best regeneration projects in Europe6.

Bari's Green Shadow Project

An example that represents a case of collaboration between local authorities and local private enterprises for ecological conversion of urban areas, is the project Shagree (Green Shadow Program) promoted by the City of Bari7. The initiative promoted by a group of local enterprises8 working in the "green" sector, in collaboration with the Municipality of Bari and the participation of the citizens, see the implementation of green roofs and courtyard in the neighbourhoods of Madonnella, Murat, Picone e Poggiofranco.

The project Shagree is aimed at defining new scenarios for greening the city of Bari through the participative experimentation of green roofs.

The conversion project started in twelve houses and as a second step will be developed in a Public space, the roof of a school situated in Madonnella neighbourhood.

The objective of the project is to realize roof gardens in order to improve the absorption of rainwater, reduce the environmental and economic costs of the house conditioning and at the same time conducting an investigation on the impacts (climatic, thermic and hydrogeological) but also at social level of the green roofs.

By now there are almost 2 thousand square meters ready to host a green roof, the realization will be entirely financed by the project as well as the first six months of maintenance services.

Together with the implementation of the green roofs the project foresee the creation of a web platform directed to citizenship and aimed at defining other ways of greening the city and developing new methods for an efficient management. Part of the project will also be the regeneration of public green areas as traffic island, traffic circle and abandoned spaces.

The project financed by the FESR Puglia 2007-2013 started in 2013 and is still on-going, by now it is still early to determine the success or the failure of the project, but according to the first results the initiative see a great participation of the citizens, both the direct beneficiaries and those who signed up later to experiment the green roof9.

These initiatives are good examples of synergies between public and private sector in promoting the regeneration of public areas in a participative perspective.

In the last case the public was the promoter but the collaboration with a consortium of private enterprises answered the need of sustainability of the project. The possibility of attracting private capital, interested in the success of these initiatives, could be a great success and represent a chance to improve these markets at regional and interregional level.

3.2 Public-Private-Partnership in conversion sector

An example of promotion of the collaboration between public and private in regulating the funding for the conversion sector is represented by the law 49/85, known as the Marcora Law.

The approval of this law allowed the purchase of a company or a branch of it by its workers, creating a system of subsidized loans for worker’s cooperatives, and clarifying the rules for the worker's buyout operations. The law allows financial organizations with state participation to provide a loan on favorable conditions to those subjects that, following the market parameters, could not access the credit conditions. The funding body is allowed to monitor the foundation processes of the worker's buyout, seeking the consent of all the parties; it validate the business

plan that supports the project and accompanies the new cooperative participation in its board of directors, as long as the credit will not be returned.

Nonetheless this device proves to be insufficient when the crisis has a "systematic" character, and especially when the worker's buyout involves the ecological conversion of the process and the product. In fact, there is a clause that makes the amount of payable credit equal to the share capital of the cooperative, made up of the workers' claims. This type of funding is not sufficient for those cases where the necessary resources are relevant or for all those operations providing a radical transformation of the production. Precisely for all those cases in which the ecology is an integrated project and requires a transformation of processes and products.

Fortunately, in these cases the recipients have the opportunity to combine public resources.

The possibility of combining resources develop the art of ecological conversion process and production: namely, the art of building a project that can benefit from resources, and at the same time to seek sustainability working on access to the credit. Otherwise, rely on sink funds can false the construction itself of the business plan, which represents the most valuable asset that such a business project can have. From this point of view, there are interesting experiences, like Rimflow and Officine Zero that attracted several manifestation of interests from different bodies and are now collaborating with universities, research centres, trade associations (such as the ONU Network), cooperatives and other professionals, social resource that are closely involved in the construction of their business plans, giving solidity and credibility.

3.3 Other initiatives of other sectors addressing conversion sector

There are numerous initiatives of civil society, students, activists, workers, and ordinary citizens who represent excellent examples of ecological conversion and contribute to the promotion of an alternative economic, productive, environmental and energy model in our country .

We chose to present some of the experiences that seem more significant to give an insight of the realities dedicated at promoting the transition to a productive, economic and social model more equitable and respectful of the environment and public health.

Officine Zero's experience

Officine Zero is a project aimed at regenerating a dismissed industrial area. The site is a factory under bankruptcy proceedings, currently occupied by common people interested at making it productive again.

Officine Zero are located in an old service station site, formerly RSI (Night Trains maintenance), in the heart of Rome. On 1 June 2013, facing with the failure of the company and in support of the labour disputes of the workers, a broad coalition formed by social workers, students, artisans, unemployed, precarious workers and self-employed, has re-opened the factory gates to regenerate the area and give new employment perspectives. This led to the creation of the OZ-Officine Zero project, developed as an answer of common citizens to unemployment and isolation of disadvantaged groups. The proposed project has the objective of experiencing a different concept of work, and proposing an alternative use of the maintenance station.

Cornerstone of the project is, today, the conversion and regeneration activities located in the former plant, implemented by a cooperative created by former workers, craftsman, unemployed and knowledge workers. The project started from the idea that the skills of the night trains maintainers could be re-employed in a public utility service: a centre for re-use and recycling, which operates in the field of repair, reuse and crafting.

In a context of constant deindustrialization (in 2014 the Lazio Region was the second in Italy for the number of business failures) initiatives like this represent an excellent example of civic participation in ecological conversion. This project wants to provide new forms of mutual aid and raise awareness among the social fabric of the need to initiate projects that give innovative

answers in concrete terms, and the new challenges that sustainable transformation of production processes, consumption and employment are developing.

This experience promote an economic model that aims to be stable and sustainable, while activating a process of reshoring of local economy thus a physical and organizational rapprochement to the territory of productive virtuous.

Rimaflow: a factory recovered

As a consequence of mismanagement, in December 2012, the Maflow enterprise located in Trezzano sul Naviglio, historical factory of the automotive sector in Italy, decided to relocate its production in Poland leaving 330 employees out of work and giving the worst response to the crisis that hit the company since 2009. Faced with this economic and social tragedy, the workers decided to respond by restarting the activities inside the hangars abandoned by the owner, but this time in a self-managed system. They decided to oppose to the decisions imposed from the top, reclaim their work and encourage the full participation of the collective members in all business decisions.

A failing company policy, speculation and relocations had left km and km of abandoned structures, real "ecological bombs" ready to explode. When checking the state of conservation of properties and pollution levels the workers had discovered that the levels of pollution of the soil and groundwater were over the allowed and the first thing they had face was to carry out interventions to secure the asbestos roofs.

The experience of the former employees of the Maflow is not an example of workers buyouts, in fact they didn’t invest their savings in the redevelopment of the company; the only investment was in time and work to recover and improve the spaces of the factory, by following the principle that is the work that produces wealth and thus income. The Maflow produced automotive components and, during the dispute, the workers have been unable to

keep the machinery that has been taken away in Poland. However, even if they could retain the old machinery there would be no chance of being competitive in the automotive industry. Therefore by necessity and by choice, they have decided to take an alternative route to industrial productivism converting the activities and spaces of the factory in ecological terms, and build a "village of the alternative-economy" where productive activities and social activities meet to withstand the crisis.

All the activities concur with forms of self-financing and engagement to promote the mission of the project and are designed according to the logic of km0 in order to reduce environmental impacts due to the transport of goods. Km0 is first of all conceived as geographical proximity and as well as proximity of values and principles. Inside the abandoned warehouses are now developed several activities: a second hand market, where besides the twenty original members (ex-workers of the Maflow), hundreds of unemployed have the opportunity to build an income. They also organize workshops of artisans and artists, courses and cultural activities, a hostel for refugees and homeless, social and cultural events. These activities generated the opening of a small restaurant-bar for the members and users of the “village of the alternative economy”.

The issues that they are still facing rests on several levels: they are still struggling for the legal authorization to use the site and secondly the difficulty to become an alternative in a market economy that is still strong in the territory. Therefore the need to build synergies with realities that are working in the same direction and promoting the participation at community level, is becoming a key element and a support to relocate the market and change consumption habits of locals.

The recovered factories can be a pragmatic solution to the destruction operated by the productive forces also over the environment because they keep the work and control over local territories. The need of an ecological and social conversion is more and more urgent. Rimaflow is an example of how we can go out from the social and environmental crisis that we are facing by changing the procedures and paradigms that govern the production of goods and their consumption.

4. Conversion sector development trends in Italy

4.1 Challenges, issues and concerns faced by the conversion sector

There are several challenges faced by the conversion sector in our country, so far we mentioned the gaps related to the current legislation and the answers provided by the local institutions and the civil society by referring to examples of conversion of abandoned industrial areas that promoted a structural and productive regeneration through ethics and social development of local communities. We continued analysing some of the financing instruments at national and regional level that support and promote initiatives to ecological conversion.

But there are still two outstanding issues representing crucial challenges for the conversion sector. The first one is undoubtedly the transition to an energy model independent from fossil fuels. With the view of achieving the ecological conversion of the whole economic system a key role is played by renewable energy. The individual engagement has to be supported by a systematic penetration of the alternative sources in the productive and social fabric of the country.

The answer to the energy challenge can come from civil society; when the latter is able to play an active role and to contribute to the common good and where communities are strong and the people is an active part of the process, the presence of a state in management issues becomes lighter and the market less influential in decision-making. The energy sector is the one that best describes the importance of the decentralization of powers from the state to the society conceived as groups of citizens connected to its own context, its own territory and culture.

Another key challenge that the sector of the ecological conversion is facing is the one related to finance and changing of the dominant economic model.

We cannot leave the ecological conversion of the economy or entrust the jobs creation to the " invisible hand " of the financial market –oriented only by to the maximization of profits and

unable to operate in the public interest. We should instead ask for more stringent rules and controls, and rethink the tasks and objectives of the market. The finance has to retake its authentic meaning: a tool and not a goal; we should question us on which environmental, social, economic model we want to achieve, and only later understand which are the most effective financial solutions to accompany and support it.

In response to these challenges “Banca Etica ” was created in Italy, a bank with substantial differences compared to the 'traditional' banks. It has been created with the initial idea of providing funding only for the third sector and non-profit, but lately it expanded its activities also to a specific and well-defined profit categories that have social interest, such as the organic food or energy efficiency and renewables, and loans to physical people. Banca Etica is also the only bank which, in addition to the normal economic investigation, also makes a preliminary environmental research to ensure that those who ask for a loan complies with the principles contained in its Charter with regards to democratic participation, equal opportunities, environmental standards and workers' rights.

The assessment of the economic and non-economic impacts is a different way of understanding the banking business that considers not only the positive results in terms of financial achievement but also the environmental and social impacts. Today the suffering rate of the Italian banks is around the 10% (ex. On 100 Euros loaned 10 do not return to the bank or have still huge repayment difficulties). For the Banca Etica, which lends to individuals often excluded from the mainstream banking, the suffering rate is five times lower than the average. A demonstration that a better knowledge of the non-economic aspects and the trust relationship established with the applicant allows to work in a more sustainable way, not only from a social and environmental point of view, but also in economic terms.

4.2 Trends in the development in the conversion sector

There are several initiatives at the national level that respond to the need of ecological conversion, in this section we will cite some examples that give an overview of the evolution of conversion sector in our country.

The Energy Community represents a response to the energy. Cited in the European Directive on Energy Efficiency (2012/27 / EU) Community Energy Strategy; the Energy Communities are those communities that have the objective of solving the energy problem, in terms of generation, energy efficiency and saving, management (balance of supply and demand) and trading.

The promotion of these new energy models has led the operators of the energy sector in our country to agree that we are facing a period of global change and the need of restructuring the energy market, diversifying the supply using renewable energies is a key aspect for the sustainability of the system. An important step that goes in this direction and offers great hope happened on Jan. 26, 2014 when, following the proposal of the Coordination FREE (Renewable Energy and Energy Efficiency), the Ministry of Economic Development, the Energy Authority, Enel, Terna, Confindustria and other stakeholders of the establishment shared the text "Towards a new organization of the energy market" that contains a series of proposals on how to start a process of conversion of the energy model.

The possibility to produce energy has many positive impacts for a community, it does not only mean reaching high levels of energy security in the supply but also achieving significant results in terms of environmental protection, renegotiate the prices, and transform the way in which we use energy, for example by exploiting periods of surplus or enhancing the energy from renewable sources developing jobs related to it. The energy management would become easier and optimized in line with the objectives of the community, with additional benefits in terms of efficiency and effectiveness.

Referring to the problems relating to finance and access to credit in addition to lending activities, there are alternatives forms of finance: for example the development of peer-to-peer

business where the lender and applicant meet directly; usually on a virtual platform, in which any web user can provide a certain amount of money that is then invested in projects submitted through the platform.

Another tool that is in rapid evolution is the equity crowdfunding. Here the focus is not the loan but venture capital invested by those who intend to participate as a partner in a given project.

In conclusion, different tools can meet different needs, but it is crucial to evaluate operational methods and aims. Microcredit can help people or entire communities to come out of poverty but can turn into a kind of legalized usury; ethical funds can guarantee an investment that is consistent with their principles or be a pure marketing operation; venture capital and equity crowd funding provide essential funds to encourage the takeoff of many innovative activities.
The key issue is therefore having a direct knowledge of the financial tool that we choose, to be able to invest the resources in a consistent way, consistent with our personal principles and to evaluate their effects. For this reason the watchword is transparency and a relationship that is closest as possible between all parties involved in financial relationships.

B. Sector development trend study in Croatia

1. Overview of the conversion sector in Croatia

The conversion sector and particularly sustainability criteria are not clearly defined, therefore a sector itself does not exist in Croatian policies and legal framework. On the other hand, some parts of the conversion sector, such as building renovation, are defined better because of binding EU energy efficiency targets.

The sustainable site conversion could include various methodologies including ecological benchmarks such as energy efficient renovation, zero energy buildings, use of renewable energy sources, waste and water management, but also social ones such as public participation and local community involvement in development, planning and project implementation.

For the reason mentioned above sectors that are dealing with sustainable conversion are covering the following policies: energy efficiency, building and building materials, land use and spatial planning, tourism, industry, entrepreneurship, communal affairs, environment and climate protection and strategic planning.

The guidelines and targets in the above mentioned sectors are harmonized with EU legislation, particularly in the field of energy efficiency in buildings, environment protection, spatial planning and land use, but the implementation is still far from targeted goals.

Social sustainability is on the other hand poorly implemented, measured or described in any conversion process. According to the study “Who is the owner of ex-military bases in Croatia – experiences of conversion in Croatia” none of the case studies of conversion showed any level of public participation – public hearings or any other participatory method.

In the education area there is only one integrated profile, but lacking social aspect. Courses on sustainable architecture are also taught on faculties, in some vocational schools and occasionally performed by CSOs as informal education. There are people and teams who are educated and able to partially cover sustainable conversion topics.

2. Existing policies and legislation for conversion sector

2.1 National strategy, plans and other approved documents covering the conversion sector

Conversion of existing urban sites according to sustainable standards is not in the domain of a particular ministry or public institution in Croatia. Therefore the focus is split here to key legislative fields: environmental and climate protection and construction with spatial planning. The legislation and policies dealing with construction and spatial planning public spaces are in the domain of Ministry of Construction and Physical Planning, and environmental and climate protection is in the domain of Ministry of Environmental and Nature Protection. From the legal and property ownership aspect, Government of Republic of Croatia or local authorities are responsible for the management and maintenance of public real estates, or they might sometimes be under concession of a private body – agricultural land or water use for economical purposes for example.

Other governmental bodies in the executive domain are:

- Environmental Protection and Energy Efficiency Fund,
- Agency for legal transactions and real estate brokerage,
- Center for Monitoring Business Activities in the Energy Sector and Investments,
- National bureau for spatial planning,

- National bureau for the management of state owned real estate,
- Regional (county) construction and spatial planning offices,
- Local (city or municipality) construction and spatial planning offices,

Strategic documents and laws related to sustainable conversion on a national level are:

- Spatial planning strategy and programme,
- Spatial development strategy to 2030,
- Sustainable development strategy,
- Energy development strategy to 2020,
- Industry development strategy from 2014 to 2020,
- Strategy for conservation, protection and sustainable economic development of cultural heritage in Croatia from 2011 to 2015,
- Low carbon development strategy (framework),
- Spatial Planning Act,
- Energy Efficiency Act,
- Building Act,
- Construction Products Act,
- National action plans for energy efficiency from 2012 to 2015 (3rd),
- National action plans for renewable energy sources to 2020,

- Rural Development Programme of Republic of Croatia from 2014 to 2020,
- Energy retrofit programmes from 2014 to 2020:
- Programme of energy renovation of family houses,
- Programme of energy renovation of multi-residential buildings,
- Programme of energy renovation of non-residential commercial buildings,
- Programmes of energy renovation of public buildings.

And also on a regional and local level:

- Regional (county) and local (city and municipality) spatial plans
- Programmes for energy efficiency in indirect energy consumption (counties and large cities)
- Sustainable Energy Action Plans (SEAP) for cities and municipalities.

3. Funding for conversion sector

3.1 National, regional and local programmes covering activities in the conversion sector

Main EU funds for a programme period 2014.-2020 that are or could be used for conversion sector are: URBACT III, INTERREG Europe, Horizon, LIFE, ESF, Fund for Regional Development (EFRD), Agricultural Fund for Rural Development (EAFRD) and Cohesion fund.

Main national funding programmes covering activities on the local level are energy retrofit programmes which include family houses, multi-residential buildings, non-residential commercial buildings and public buildings. The programmes are funded by Environmental Protection and Energy Efficiency Fund (Fund) and the financing is excluded from the national budget lines. The funds are provided through regular sources of the Fund such as charges on polluters of the environment, charges on users of the environment, charges on burdening the environment with waste, special environmental charges for motor vehicles. The role of the Fund is to secure minimum of 40% of the investments in energy efficient measures. The other part is covered by private investor and through public investments such as city or municipality budget and EU funds.

Main EU project with activities related to conversion sector in Croatia is Build Upon. Its goal is renovation of existing buildings to high standards of energy efficiency, and it is funded from Horizon 2020 programme and coordinated by Croatia Green Building Council. The EU requires each country to establish a national renovation strategy; a long-term strategy for renovating the nation's homes and commercial buildings to high standards of energy efficiency. This had to be done for the first time by 30 April 2014, with strengthened strategies to be delivered every three years thereafter, with the next by 30 April 2017. Build upon is the project on building renovation – bringing together over 1,000 organisations, across 13 countries, at 80 events in 2016-17. It aims to create a renovation revolution across Europe by helping countries to deliver strategies for renovating their existing buildings, by the 30 April 2017 EU deadline. These strategies are critical to cutting Europe's energy use, reducing the impacts of climate change, and creating buildings that deliver high quality of life for everyone.

On the local level, 59 municipalities have voluntarily committed to make and implement Sustainable Energy Action Plan (SEAP). The goal of the SEAPs is provide measures for a reduction of CO2 equivalent emissions for a minimum of 20% by 2020, or with newly set targets 40% by 2030. The funds are secured through national Fund, municipality budgets and EU funds. Since building sector is responsible for substantial share of direct and indirect CO2

emissions, proportional part of the SEAP measures are related to building sector - renovation or new buildings with high energy standards in local communities – cities and municipalities.

Programmes of energy renovation of public buildings

The building sector, including public, residential and commercial buildings in Croatia, accounts for around 40% of total energy consumption, therefore energy efficiency of buildings, which means providing minimum energy consumption in order to achieve the optimum comfort of living and use of the building, is very important. There is around 13,8 mil. square meters of useful surface in public buildings (2010), and 43,9 % is heated surface. Agency for legal transactions and real estate brokerage is responsible for the implementation of the programme. Two years from the adoption of the programme around 210 projects accounting for 420.000 square meters are realized or in implementation phase.

The measures that are implemented are:

- Energy audit and energy certificate - assessing the energy performance of the building or its part,
- Increase of thermal protection of the building through thermal insulation and energy efficient windows and doors,
- Energy efficiency increase in heating, cooling and ventilation systems,
- Energy efficiency increase in lighting and electrical appliances,
- Use of renewable energy systems for electricity or heat.

Campus Borongaj is a renovation project of a former military base into the university campus.

It was opened in 2007, and since then hosts three Faculties with offices, restaurant and learning facilities. So far the first phase of the renovation was completed with nine buildings adapted. Future goal in form of a project Campus Borongaj: A Living Lab for Zagreb is to make a

public university that uses, promotes, teaches, and invents sustainable solutions and principles. Some of them are already implemented but most of them are waiting due to limited financing.

Architecture project for Campus has predicted the use of renewable energy sources, such as biomass, geothermal and solar energy aiming for zero emissions from energy sources. Also treatment of all waste water, zero Co2 vehicles, Innovation Park, and extensive green areas are planned to be integral part of the project.

The project for the Campus follows the guidelines made by International Sustainable Campus Network on the following 3 issue:

- Foster sustainable construction, renovation, and campus operation

How can the latest sustainable building guidelines best be adapted to and implemented in university and corporate campus settings? How can ongoing operations on campus be optimized for sustainability?

- Foster sustainable master planning and development, mobility and community integration

How can master planning for sustainability optimally structure the interfaces between buildings and users, different buildings on campus, and campus and the surrounding communities?

- Foster the practice of linking facilities, research, and education for sustainable development

How to best create “buildings that teach” in relation to sustainable development by demonstrating and inspiring cutting edge research on environmental and social issues? How can research and education transcend disciplinary boundaries, a requisite for socially salient solutions?

3.2 Other initiatives of other sectors addressing conversion sector

During the last 20 years several projects initiated from the civil sector have managed to use opportunity of abandoned state buildings, many of them military bases which are a legacy of the Yugoslavian military structure. The projects are in various phases, finished, or still being under renovation.

Eco center Zlatna greda, NGO Zeleni Osijek, Osijek

The project aim was to refurbish abandoned building used by hunting associations in Nature park Kopački Rit. Main activities that are performed are education in nature and adventure tourism. Creator and founder of Eco centre Zlatna Greda is the Association for Nature and Environment Protection Green Osijek. Founded in 1995, it focuses its work on protection of natural and cultural resources and sustainable development of Eastern Croatia. Green Osijek founded Eco centre in 2003 as a field base for many activities. Eco centre soon became the focus of most programs and projects. Employees, partners and volunteers of Green Osijek implement educational, nature and environment protection activities.

Solar academy Šolta, NGO Zelena akcija, Zagreb

Solar academy is a project initiated by Zelena akcija - Friends of the Earth Croatia. It is a good case practice how to convert abandoned public site – military base into civil education centre. Since it is located in Adriatic, with perfect potential for renewable energy use, it is a polygon for testing and workshops. Solar academy is active in the summer season hosting international and national workcamps, workshops, conferences and meetings of environmental NGOs.

Community centre Rojc, Association of NGOs Rojc, Pula

Community centre Rojc is located in the former military building in centre of Pula, Istria County. It is an almost 17.000 square meters large building from the Austro-Hungarian era. In the early 1990s, the building was squatted and first NGOs moved in. Today it operates as a formal community centre managed and co-financed by City of Pula with 109 NGO residents. Public space within the building is also being converted toward the needs of community and

civil actors, e.g. starting permaculture garden, tree alley etc. Commercial parking lot as a proposal was successfully stopped by public demonstration, and debate offered alternatives to the private initiative.

Association of NGOs Rojc is also a partner in the EU project Origin of Spaces (OOS). In response to new societal and economic change there has been an emergence of innovative multi-disciplinary spaces that include co working, co living, environmental and ecological transition and are examples of the shift from a turn of the century model of working and living to something more adaptable, shared, collaborative and holistic. During 3 years of the project the, partners of OOS will exchange, co-create, collaborate, meet, and learn from each other to better understand the methods, practice, applications and uses of these so called 'Third Place'. Ultimately the project will be key to understanding the operation of these eco systems and sharing of tools for development and replication. The Origin of Spaces will open up possibilities to network, collaborate and share these spaces and their methods to a local and international audience. The Key areas are:

1. To facilitate the development of new hubs by the sharing of knowledge and skills to better equip those wishing to create a hub to do so, this will be via the on line toolbox.

2. To foster economic cooperation between the territories and partners.

3. Collating best practice, models, knowledge and methods related to the emergence of innovative eco systems and sharing them.

4. Conversion sector development trends in Croatia

4.1 Challenges, issues and concerns faced by the conversion sector

Accession process and Croatian membership in the EU since July 1st 2013 induced stronger application of EU funds in order to implement common EU policies in the sectors of

sustainable development and climate. These horizontal policies enabled a series of public and private investments in the building sector resulting in increase of energy efficiency in the buildings. Adoption of EU targets concerning renewable energy tackled the incentives schemes for renewable energy installations, primarily wind and solar power plants. In this sector still big private investments have advantage and better chance compared to smaller private or community owned projects. Other horizontal EU policies toward the stronger civil society enabled more public participation in public policies processes, but again strong connection between private investors and authorities often leads toward corruption and misuse of public resources – space, water, forests, sea, air, etc.

Promotion of brownfield investment instead of greenfield is also more present, and it is a positive leap toward concerning sustainability. In general public awareness on sustainability issues is higher which is explained by adoption of EU trends.

Main challenge for the sustainable conversion sector is that no “top-down” definition or agenda, and therefore no policy is introduced. So far energy efficiency standards are being implemented when conversion or renovation takes place, but nothing further in terms of social aspect is introduced.

Concerning public participation in conversion or renovation projects providing information via institutional website is the most basic and in general non-interactive way of communicating with citizens. Organization of public events and organization of seminars is also one method being implemented sporadically.

Lack of criteria and respectively sets of indicators is also an obstacle for sustainable approach in this sector. Several EU projects mentioned below have activities for the development of criteria and indicators.

National renovation strategy would certainly help to explain what sustainable conversion and renovation are, and what criteria and indicators should be accounted for when preparing projects.

4.2 Trends in the development in the conversion sector

Most of the positive development trends are linked to current state energy retrofit programmes in public, residential and commercial buildings sector (see 3.1).

There are some changes in spatial and urban planning approaches such as broader usage of GIS as a tool for visibility and public participation. In building sector harmonization with EU energy efficiency standards started energy retrofit programmes that are showing good results primarily in public sector – renovation of schools, hospitals, public offices, kindergartens, and other public institutions. Conversion of state owned building primarily the usage is also more present, such as renovation of military objects for university purposes (dormitories, restaurants, teaching rooms, etc.). These projects do not have all components of sustainability, usually fulfilling financial condition – with public funds, and social condition of being acceptable and enabling new employment. There are no clear indicators for overall environmental and social sustainability so it is not possible to assess it.

Beside “top-down” initiatives mentioned above, “bottom-up” project or initiatives important to be mentioned are listed and described below:

GREEN Building Council, Zagreb, Croatia

Croatian Green Building Council (CGBC) is an NGO established by various institutions (Faculties, US Embassy, Association of architects, Economy chambers) and companies in the construction field. They are responsible for certification and education of verified persons for GB PRO programme based on LEED and BREEAM programmes.

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Prerequisites and credits differ for each rating system, and teams choose the

best fit for their project. LEED is flexible enough to apply to all project types. Each rating system groups requirements that address the unique needs of building and project types on their path towards LEED certification. Once a project team chooses a rating system, they'll use the appropriate credits to guide design and operational decisions. There are five rating systems that address multiple project types:

1. BUILDING DESIGN AND CONSTRUCTION

2. INTERIOR DESIGN AND CONSTRUCTION

3. BUILDING OPERATIONS AND MAINTENANCE

4. NEIGHBORHOOD DEVELOPMENT

5. HOMES

For example, categories covered in BUILDING AND CONSTRUCTION rating systems are:

- Location and transportation (green vehicles, bicycle facilities, access to quality transit, reduced parking footprint, etc.)

- Sustainable sites (site assessment, protect or restore habitat, open space, rainwater management, heat island reduction, light pollution reduction, site master plan, joint use of facilities, direct exterior access, etc.)

- Water efficiency (outdoor water use reduction, indoor water use reduction, building level water metering, etc.)

- Energy and atmosphere (minimum energy performance, advanced energy metering, demand response, renewable energy production, enhanced refrigerant management, green power and carbon offsets, etc.)

- Materials and resources (storage and collection of recyclables, construction and demolition waste management planning, building life-cycle impact reduction, source reduction – Mercury, Lead, Copper, Cadmium, Furniture)
- Indoor environmental quality (Minimum indoor air quality performance, environmental tobacco smoke control, acoustic performance, enhanced indoor air quality strategies, low emitting materials, indoor air quality assessment, thermal comfort, interior lighting, daylight, quality views, etc.)
- Innovation
- Regional Priority

Project Campus Living Lab – Faculty of Architecture, Zagreb, Croatia

The aim of the project is to research and develop an innovative model for a green building (based on student housing) on the campus that could be certified as A+ by applying new materials and technologies, the climate sensitive design approach and testing the possible alternatives with the future users in alignment with the Living laboratory principles. The research is an extension of the present green campus multidisciplinary research and development. It belongs in the architecture domain, but it also includes interdisciplinary participation from other professions. The project refers to the university campus Borongaj in Zagreb as an explicit framework of their research. The plan is to build it as a green campus with the highest level of energy efficiency. In its full form, that campus should be a place for studying, working, learning and living for about 20,000 academic citizens. For that reason, it was necessary to design a complex system and implement cutting-edge green technology and energy efficiency principles: bioclimatic principles of renewable energy sources, advanced technology, smart systems, and user adaptation of the new environment and technology within

the methodology of the living laboratory concept. In the proposed three year project the team would research new materials, building elements and construction methods to define those appropriate for implementation. Using Building Information Management software and sustainable design principles the team will develop alternative building proposals that will be analysed based on detailed energy, cost/benefit and quality of life simulations. The input from the construction industry is also planned. The third phase of the project is a testing phase in which, through student surveys and direct input from a selected group of students, the team expects to refine the proposals. In the end the research result needs to be evaluated within the high expectations of the green campus concept.

Project POCACITO – international consortium of partners (UNDP Croatia)

The project Post-Carbon Cities of Tomorrow – foresight for sustainable pathways towards liveable, affordable and prospering cities in a world context (POCACITO) is a research project funded by the European Union's Seventh Framework Programme for Research, Technological Development. The objective of the project is to facilitate the transition of EU cities to a forecasted sustainable or "post-carbon" economic model, eventually leading to an evidence-based EU 2050 post-carbon city roadmap. At the core of the project is a series of participatory stakeholder workshops in the case study cities of Barcelona, Copenhagen/Malmö, Istanbul, Lisbon, Litoměřice, Milan/Turin, Rostock and Zagreb. The purpose of these workshops is to bring together local stakeholders to construct a common post-carbon vision for 2050 and roadmap, or action plan, to reach the vision. The workshops will highlight the current successes and challenges facing the city and support a discussion of city-specific innovative measures based on lessons learned from local experience and best practices.

The City Acupuncture, Zagreb Society of Architects

The City Acupuncture is a 2-year project designed in collaboration of 5 associations from 4 different countries of Southeast Europe with the aim to improve the quality of urban life by international cultural exchange.

Zagreb za Mene (Zagreb for Me), Zagreb Society of Architects, Faculty of Architecture, City of Zagreb office for spatial planning, construction, communal affairs and transport

Zagreb for Me is a urban revitalization project of public spaces in City of Zagreb through implementation of 17 actions and interventions in public spaces throughout the whole city area. For each of the locations the architecture-urbanistic based competition will be organized. Project is initiated by Zagreb Society of Architects in cooperation with Faculty of Architecture, University of Zagreb. In the process of revitalization beside the active role of the experts, participation of citizens, civil organizations, and other initiatives is highly expected aiming to contribute with the ideas to the project.

REtrofitting PUBLic spaces in Intelligent MEDiterranean Cities – REPUBLIC MED, Energy Institute Hrvoje Požar, Zagreb, Croatia

Public buildings are considered as a key component towards the development of future smart cities for the following reasons:

-The public sector must play a leading-by-example role in formulating energy efficient cities.

- The efficiency of public services depends on workers' productivity which is directly affected by indoor comfort and air quality conditions. Measures to ensure the latter elevate productivity and improve services, within the context of a functional smart city.

- Most public buildings are old therefore they are not harmonized with recent directives and legislations.

- They possess a high energy-saving potential which can be achieved through technical solutions.

- They represent reference components in establishing sustainable bridges to future Smart Cities.

In addition, microclimatic and environmental conditions in public open spaces (squares and courtyards) affect pedestrians' comfort and hygiene, as well as indoor living conditions and energy consumption. However, current national design tools disregard external microclimate in assessing and suggesting measures to improve indoor conditions and energy performance, while national energy policies do not institute mandatory measures for open spaces.

The REPUBLIC-MED project deals with retrofitting of public spaces by utilizing innovative methods for performing complete techno-economic studies. The concept of the approach is to identify inefficiencies of current national design tools and actively respond for the elimination of these drawbacks. The main steps of the project are summarized as follows:

- In a first step, the current capabilities and drawbacks of technical studies will be assessed in combination with national policies implemented for retrofitting.

- Secondly, innovative design methods (e.g. field models for predicting airflow pattern and for formulating bioclimatic maps) will be identified, that overcome the drawbacks recognized above. These methods will include microclimate, energy consumption indices, decision making strategies and smart financing schemes for choosing the best retrofitting solution in techno-economical terms. In this step, the methods will be organized so that a complete retrofitting methodology is produced.

- In a third step, the methodology will be applied through pilot studies in various typologies of public spaces. An action plan agreed at transnational level will define the criteria for selecting the spaces.

- The results of the aforementioned experimentation will be analysed and discussed in various capitalization workshops in order to reach a final set of conclusions. Training seminars will be organized in a national level for capacity building of technical personnel of public authorities and SMEs.

- Local/regional action plans for incorporating the methodology in local/regional policies.

- Finally, a strategic plan will be formulated aiming to the incorporation of the new methodology as a successful story into EU future policies.

C. Sector development trend study in Germany

1. Overview of the conversion sector in Germany

In Germany the term “conversion“ describes in the town planning the reintegration of fallow sites in the economic circulation and natural circulation or the change of utilization of buildings. At the beginning of the 20th century the concept "conversion" mostly called the change of surfaces for military purposes, later it was used in the course of the conversion by former military arrangements (conversion surfaces) for civil purposes. In the course of the years the concept found use also with other developing surfaces.

From a modern perspective the squatter's movement since the end of the 1970s – not only in Germany –- can be seen from a historical perspective as "an initial ignition" of urban processes in social and sustainable transformation. Empty, abandoned buildings or surfaces were taken by informal groups in "possession". Later many of these illegal activities have been legislating by long-term contracts. The majority of the occupants often had a social as well as ecologically friendly pretension – what affected at least the processes of transformation. Valuable old buildings could be preserved in this way, were renovated later, often energy-efficient and socially acceptable. Free surfaces and fallows were supplied, for example, for an informal garden use and thus became biotopes important for the urban climate.

In the course of the German reunion since 1990 many empty buildings and free surfaces - primarily in the former GDR – were suddenly available for interim use. Here space was originated for alternative cultural, social and economic projects, partly with longer-term continuance. However, often this also led to the fact that whole town quarters experienced a

change of the dilapidated redevelopment area to a gentrified residential area for high income earners.

However, these developments led to decisive impulses, if it is at the universities, at the political parties or in the German society. In subjects as for example town planning, spatial planning, traffic planning, architecture, construction engineering or geography the sustainable and social aspects achieved quite a new, big value. So, for example, energy-efficiency now is the measure of all things in building design.

Today in Germany in the field of conversion we'll find a diverse range of activities, businesses and policies by both governmental and non-governmental organizations. Many different actors are studying, researching and working on subjects like urban affairs, spatial development and urban restructuring.

The national guideline formulated by the Federal Institute for Research on Building, Urban Affairs and Spatial Development might show the status of the conversion sector at the governmental level in Germany:

"The renewal and restructuring of our cities, as well as preserving the functionality of the city organism, are central tasks of a sustainable urban policy. Traditional urban renewal concerned primarily inner city districts: the main focus was on removing urban-planning grievances. In the "formally designated" redevelopment areas, it was, and is, mainly about modernising and demolishing buildings as well as the functional strengthening of individual areas and improvement of the living environment.

Urban redevelopment, whose importance has been growing in recent years, targets first and foremost major housing estates. This involves primarily the demolition of industrially manufactured, prefabricated concrete high-rise buildings in the former East Germany. High population attrition and changes in living preferences have led to vacancies and loss of appeal here.

The challenges can no longer be managed through housing measures alone, but require integrated urban development concepts. All spatially relevant policy areas must also act in concert. Improvement and rehabilitation measures affecting the living environment, and which must follow demolitions and modernisation efforts, are of increasing significance. Important tasks of urban redevelopment also include the civilian use of former military areas, fallow commercial land and infrastructure that no longer meets today's demands.

Over the past decades, the urban development policies of the federal, state and municipal governments have helped to eliminate urban planning grievances, preserve building stock and functionally strengthen city districts. As demographic and economic conditions are changing substantially, sustainable urban development – as an instrument for preserving building stock and strengthening functionality – will be become ever more important."

2. Existing policies and legislation for conversion sector

For Germany as well as for the European Union the "LEIPZIG CHARTER on sustainable cities" is the guideline for both policies and legislation, also for the conversion sector.

The European Ministers committed themselves to:

- initiate a political debate in their states on how to integrate the principles and

strategies of the Leipzig Charter on Sustainable European Cities into national,

regional and local development policies,

- use the tool of integrated urban development and the related governance for its

implementation and, to this end, establish any necessary framework at national level

and

- to promote the establishment of balanced territorial organisation based on a European polycentric urban structure.

Further they recommended making greater use of integrated urban development policy approaches and that special attention is paid to deprived neighbourhoods within the context of the city as a whole.

Many national policies and governmental legislations are based on this charter and its predecessor “AALBORG-CHARTER” or the “LOCAL AGENDA 21”. These urban programmes all deal more or less with the conversion sector.

They are for example:

- Soziale Stadt
- Stadtumbau Ost
- Stadtumbau West
- Aktive Stadt- und Ortsteilzentren
- Städtebaulicher Denkmalschutz
- Kleinere Städte und Gemeinden
- Städtebauliche Sanierungs- und Entwicklungsmaßnahmen
- Investitionspakt

So for urban planning there are many possibilities. On the other hand it is more difficult to find similarly policies in the field of spatial planning. But this might be a task as well as an opportunity for our COMPASS-project.

2.1 National strategy, plans and other approved documents covering the conversion sector

As mentioned most national strategies and plans are following the principles of the LEIPZIG CHARTER. Some corresponding examples of regional, national and also European programmes are listed below.

General Departmental Research

The projects of the research programme "General Departmental Research" support the federal policy of spatial planning, housing and urban development. The projects aim to examine topical questions of spatial planning and urban development planning, housing and building issues, clarify political needs of action and provide scientifically sound principles for the development of political instruments and actions.

Experimental Housing and Urban Development

With the research programme Experimental Housing and Urban Development (ExWoSt) the Federation supports innovative planning and measures regarding important civic and housing political topics through:

- Fields of research and model projects
- Studies
- Initiatives

From the experiences, hints for the further development of the urban planning and housing policy should be derived and the knowledge transfer supported.

The programme is supervised by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) within the Federal Office for Building and Regional Planning (BBR). The BBSR is a departmental research institution in the portfolio of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB). It is responsible for research and specialist advice in the spheres of spatial planning, urban development, housing and building.

Demonstration Projects of Spatial Planning

Model projects are an important instrument for federal spatial planning to implement a stronger process, action and project oriented understanding of planning and politics. More campaigns and projects instead of programmes and planning is the principle for spatial development since the nineties.

With the action programme "Demonstration Projects of Spatial Planning" (MORO) the Federal Ministry of Transport, Building and Urban Affairs supports practical trials and implementations of innovative action approaches and instruments for spatial planning in co-operation with science and practice, i.e. together with participants on site, in the region.

For this purpose it funds and supervises:

- Fields of Research and model projects
- Studies
- Initiatives

Research initiative "Future Building"

The research initiative "Future Building" of the Federal Ministry of Transport, Building and Urban Development aims to strengthen the competitiveness of the German building sector in the European internal market and to remove existing deficits particularly in the sector of technical, building cultural and organisational innovations.

In the research initiative research projects on the following theme areas are to be supported or commissioned inter alia:

- Added value chain "building"
- Sustainable building/Building quality
- General conditions
- Current challenges/New markets
- Energy-efficient and climate adapted building

ESPON 2013 (European Spatial Planning Observation Network)

The European Spatial Planning Observation Network ESPON was founded in 2002 by the EU member states and the European Commission in order to improve the knowledge and information bases of the European spatial development policy. Apart from the 27 Member States, the neighbouring states Norway, Switzerland, Iceland and also Liechtenstein take part. The Programme is financed by the Member States and the European Commission.

The ESPON 2013 Programme is supported by national institutions ("ESPON Contact Points"), which assume the role of an intermediary between the European ESPON Programme level and the national research landscape, policy and planning. The Federal Institute for Research on

Building, Urban Affairs and Spatial Development (BBSR) within the Federal Office for Building and Regional Planning (BBR) is the national "ESPON Contact Point" for Germany.

INTERREG – Transnational cooperation in the field of spatial development

Removing economic, social and spatial differences and promoting the coalescence of Europe - these are the objectives of INTERREG. In the European Union as well, the "European Territorial Cooperation" concept has become a focal point of spatial development and is being supported from the European Regional Development Fund (ERDF). Transnational cooperation in cross-national cooperation areas, as promoted by INTERREG Strand B, is an important aspect here.

The Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) within the Federal Office for Building and Regional Planning (BBR) supports this transnational cooperation by

- participating in the development of joint programmes in the cooperation areas,
- steering the programmes in the context of transnational and German committees,
- supporting key projects of special interest to the Federal Government,
- supporting transnational cooperation activities,
- transferring results and running public relations,
- participating in selected projects (e.g. VASAB).

The Federal Government also supports participation in joint transnational projects. In the context of the Federal funding programme "Transnational Cooperation", the German Federal Ministry of Transport and Digital Infrastructure (BMVI) and the BBSR support partners from Germany in raising national co-financing, in developing project applications and running effective public relations work.

The energy-efficient construction of municipal and social infrastructure

The ambitious climate change targets of the German federal government demand efficient yet cost effective solutions for an improved carbon footprint. The federal government has promoted innovative approaches and transferable concepts for the energy-efficient construction of new municipal and social infrastructure by means of a pilot initiative. In the context of the research project the selected pilot initiatives were accompanied and evaluated.

The investment processes of condominium owners' associations with particular emphasis on energy-efficiency and age-appropriate renovations

Condominium owners' associations too are concerned with investments in energy-efficiency and accessibility. It is clear they face formidable challenges here in terms of decision-making and the organisation of resolutions – even more so than they do with mere maintenance. They must work together and where possible unanimously decide which measures they want to implement, how they should be financed and who should plan and execute them. As part of the research project, the investment processes of condominium owners' associations were analysed with the aid of case studies.

Europan

Europan is a biennial competition for young architects under 40 years of age to design innovative housing schemes for sites across Europe. The competition encourages architects to address social and economic changes occurring in towns and cities and offers the opportunity for cross-cultural learning and networking for the architects and site promoters involved.

German Sustainability Award

The German Sustainability Award was established in 2008 to encourage the acceptance of social and ecological responsibility and to identify role models in this area. The award is endorsed by the German Federal Government, local and business associations as well as numerous NGOs, among them UNESCO and UNICEF. The awards are presented to cities, companies and individuals promoting the idea of a sustainable society by Federal Chancellor Angela Merkel or other members of her cabinet.

INSEK

The "integrated borough development concept" ("Integriertes Stadtteilentwicklungskonzept" INSEK) is a central component and at the same time funding condition for the participation in the programme “Stadtumbau Ost”. The integrated whole planning gets on as a framework and action concept to the company of the town rebuilding process. In the course of the years a new situation originated as a result of the demographic development, e. g., with the flat inquiry and the infrastructure planning. That's why town planning offices by order of the senate management for urban development revised the concept.

2.2 Laws governing the conversion sector

Germany is known for its affinity to laws, orders, directives and administrative rules. The list is endless, also concerning the conversion sector. Additionally Germany is a federal Republic, which means that the national government is not the only player. There are many levels from the federal ministries to 16 single federal states, regions, counties, cities, towns and smaller communities.

The most important directive in planning is called “Bauleitplanung”, which is a term difficult to translate in English (maybe “urban land-use planning”). The Bauleitplanung is matter of the municipal administrations and is part of the “Baugesetzbuch”. It comprises the “Flächennutzungsplan” and the “Bebauungsplan”, which are two different levels of land-use planning. Of vital importance is the integration of landscaping and the preservation of nature. Also important is the public participation.

Other tools corresponding to the conversion sector are administrative rules depending on the Local Agenda 21. Especially in Berlin there are instruments like for example “Berlin Tomorrow: The Berlin Strategy / Urban Development Concept Berlin 2030” or “Berlin’s Neighbourhood Managing”.

3. Funding for conversion sector

As the most important financial source in funding we can mention the European Regional Development Fund (ERDF). For the conversion sector ERDF’s programme called “JESSICA” is the instrument to support sustainable urban development and regeneration through financial engineering mechanisms.

JESSICA (Joint European Support for Sustainable Investment in City Areas), is an initiative of the European Commission developed in co-operation with the European Investment Bank (EIB) and the Council of Europe Development Bank (CEB).

EU countries can choose to invest some of their EU structural fund allocations in revolving funds to help recycle financial resources to accelerate investment in Europe's urban areas.

JESSICA promotes sustainable urban by supporting projects in the following areas:

- urban infrastructure – including transport, water/waste water, energy

- heritage or cultural sites – for tourism or other sustainable uses
- redevelopment of brownfield sites – including site clearance and decontamination
- creation of new commercial floor space for SMEs, IT and/or R&D sectors
- university buildings – medical, biotech and other specialised facilities
- energy efficiency improvements.

3.1 National, regional and local programmes covering activities in the conversion sector

JESSICA is completed by further national or local programmes and tools.

An example of funding of a local programme is Berlin's Neighbourhood Management.

The Neighbourhood Management's aim is to strengthen social cohesiveness, promoting social and ethnical integration, implementing integrated urban development programs in a participatory and interdisciplinary way and is implemented under the program "Socially Integrative City". So this programme also attempts the social aspect of conversion.

From 1999 to 2015, 364 million Euros from various support programs had been spent in the neighbourhood management areas. Funds allocated as follows: National government 68.5 million Euros, European Union 112.1 million Euros, and Land Berlin 183.4 million Euros.

The money had been spent mainly on the lasting revaluation of urban area and housing environment, for social and ethnical integration, and for the support of cooperation and organization among neighbours. Furthermore, young people, who had already been excluded

from the education and labour markets, were provided with new chances of access to job training and gainful occupation.

3.2 Public-Private-Partnership in conversion sector

In Germany, there is no single body of laws governing Public Private Partnerships (PPPs). Instead, a plethora of acts, rules and regulations applies (confer point 2.2). However, the federal and state legislators now appreciate the importance of PPPs for future development in the public sector. They have enacted a series of laws to facilitate PPPs in Germany, the most notable being the PPP Acceleration Act. The federal government has also created institutions that are responsible for coordinating and facilitating the development of PPPs in Germany.

Currently, more than 100 PPP projects are in the planning or implementation phase in Germany. They range from big infrastructure projects such as the extension of motorways worth billions of euros to smaller projects such as the extension and renovation of schools, hospitals and prisons.

To facilitate the planning and implementation of PPPs, the federal government and some federal states have passed legislative measures ranging from rules and obligations for the co-operation of public and private partners to the specific promotion of such a co-operation.

We expect, especially in the face of the current financial crisis, that both the number and the value of PPPs in Germany will increase. Additional legislation to facilitate the planning and implementation of PPPs is in the making.

The City of Kassel in Hessen is considered to be a successful example of PPP.

An instrument of public-private-partnership funding is the KfW.

The KfW, formerly KfW Bankengruppe (banking group), is a German government-owned development bank, based in Frankfurt. Its name originally comes from Kreditanstalt für

Wiederaufbau ("Reconstruction Credit Institute"). It was formed in 1948 after World War II as part of the Marshall Plan.

It is owned by the Federal Republic of Germany (80%) and the States of Germany (20%).

KfW Förderbank (KfW promotional Bank), the largest business unit of the group, committed €47.6 billion in 2014, mostly for housing and environmental protection in Germany.

It is especially active in promoting energy-efficient housing for owner-occupied houses as well as for landlords, both for new houses and refurbishments. Its energy efficiency standards for houses (KfW-60 and KfW-40) have become accepted standards in Germany.

Concerning environmental protection, it promotes, among others, photovoltaic energy (solar cells) which has in turn received massive indirect subsidies through feed-in tariffs under the Renewable Energy Law of 2000. It also invests in municipal infrastructure such as public transport and sanitation through a sub-unit called KfW Kommunalbank (KfW municipal bank). More recently, it has also engaged in education where it provides student loans.

The KfW is one of the main sources for funding PPP-projects in the field of conversion.

3.3 Other initiatives of other sectors addressing conversion sector

A model for private initiative in the conversion sector is – also not only for Germany – the business improvement district (BID). This is a defined area within which businesses are required to pay an additional tax (or levy) in order to fund projects within the district's boundaries. The BID is often funded primarily through the levy but can also draw on other public and private funding streams. BIDs may go by other names, such as business improvement area (BIA), business revitalization zone (BRZ), community improvement district (CID), special services area (SSA), or special improvement district (SID). These districts typically fund services which are perceived by some businesses as being inadequately performed by government with its existing tax revenues, such as cleaning streets, providing security, making capital improvements, construction of pedestrian and streetscape

enhancements, and marketing the area. The services provided by BIDs are supplemental to those already provided by the municipality.

Six of the 16 German Bundesländer (Federal States) introduced the requisite legal framework to create BIDs: Hamburg, Bremen, Hesse, North Rhine-Westphalia, Saarland and Schleswig-Holstein. BID projects in implementation exist only in a few German cities, yet – e.g. in Flensburg, Hamburg and Giessen.

But this model does not necessarily have a social and / or a sustainable claim. BIDs have also been criticized in the past by anti-poverty groups for being too harsh on the homeless and poor who may congregate around businesses.

A more informal grassroots initiative is found in the field of urban gardening. There are fallow grounds being conversed to community gardens, intercultural gardens or even so called “guerrilla gardens”. Like mentioned in the beginning these activities were initiated by informal groups, often started by squatting a certain urban fallow ground, followed by a conversion without any financial budget but a with a lot of individual initiative. Due to a positive perception of the public many of these projects later have been legalized and also founded by official authorities.

4. Conversion sector development trends in Germany

In place of many other trends in Germany we will show the strategy for “Berlin 2030”: Design the change

Berlin is growing. The economy is well-positioned; the population is on the rise. We must use this growth for a systematic, high-quality development of Berlin that is oriented towards the future. To do so requires a perspective that can inform urban development. The goal is to make

Berlin more economically stable, more attractive to businesses, more socially balanced, and to further enhance its international reputation.

Based on the guidelines of government policy and under the aegis of the Senate Department for Urban Development and the Environment, the Berlin Strategy | Urban Development Concept Berlin 2030 focuses on the city´s future and paints a picture of the Berlin of today and the Berlin of tomorrow.

4.1 Challenges, issues and concerns faced by the conversion sector

The Urban Development Concept Berlin 2030 includes a status report (Berlin Today) and the strategies for Berlin 2030 (Berlin Tomorrow). The status report details the current situation of selected issues relating to urban development. Building on this, the strategies for Berlin 2030 focus on the city´s development goals, promising initiatives and specific areas for exemplary implementation.

As the basis for the Urban Development Concept Berlin 2030, the status report consists of a knowledge-based, data-rich analysis of Berlin´s current urban development. The status report thematically concentrates on the most important developments in Berlin. In a summary overview, the report takes a cross-sectional look at the central strengths and weaknesses, as well as the opportunities and risks, concerning a sustainable and future-oriented development of Berlin. The status report creates the foundation for the debate on development needs as well as on the strategies for the city´s future.

4.2 Trends in the development in the conversion sector

The Berlin strategy provides city-wide development perspectives focusing on specific selected urban locations in concrete, spatial terms. For these transformation areas, the Urban Development Concept Berlin 2030 describes the targeted direction of development. Target situations are defined while practical approaches to achieving them are also indicated. Transformation areas can be regions that are undergoing many changes that need intervention from the public sector, that are suitable for location profiling, or that play a special role in the fabric of the city. Thus, the transformation areas offer urban development planning the advantages of steering important development impulses in the right direction and setting priorities. This also allows public and private stakeholders to design and engage in coordinated group actions.

D. Sector development trend study Romania

1. Overview of the conversion sector in Romania

Conversion sector refers to a term that is not well known among the population of Romania. There is very little mention of it in any kind of official document in this form; rather it is simply encompassed by the much larger “Sustainable Development” term. “Conversion of used spaces/buildings” is not something that represents a main focus of urban planners and architects, it is however something that in recent times gained significant momentum among private organizations and NGO`s. Shortage of funding and lack of specifically targeted projects are the reason why sustainable conversion is less known and it’s not considered a specific, separate profession among the many architects, urban planners, etc. There are few successful projects consisting of building/space conversion for another use, but they are just starting to get momentum. Funding is not the only problem as modern technologies, renewable resources and personnel shortage is also a great factor that negatively impacts this sector in Romania, as opposed to other European countries that have a more firmly established conversion sector.

Many of the questioned people working within public and private organizations connected in some way to construction, planning or renewable energy know what “sustainable conversion” means. They also recognise the lack of funds and projects targeted towards buildings/sites that need to be converted to other uses. The existing policies and laws encourage a sustainable development, adapted to EU standards; however they give little incentive and legal tools for private and public companies alike to convert, renew or repurpose buildings and public spaces. The government has many strategies and long term goals since the mid 2000`s for a sustainable development that most of the times include the upgrade of old/existing buildings and public spaces. The ones that don`t get any attention and are not so important to be upgraded are just left to degrade.

Few private companies that start a business in the country convert old buildings for their activities. They find it much easier to build a modern, high standard office/warehouse building. There are a few examples of old buildings left to degrade for which small NGO`s or private companies find a new purpose. Despite this, “Sustainable Conversion specialist” is still a term that many don`t acknowledge as a separate profession from Architecture and Urban Planner. People think that it still has to show many examples of why it has to be considered separate from the already existing professions. Then it will need official backing such as an integrated educational programme in schools and universities, which will have social, economic and environmental aspects related to the conversion of buildings/spaces. People can see the utility of such a profession, but they also see how hard it is to develop it as a separate profession from the existing ones. This is because there is example of other larger and more acknowledged professions such as Urban Planner that address sustainable development and still they are less renowned than already existing ones like architecture, construction engineering, etc.

All-in-all the “Conversion Sector” in Romania has a long road ahead until it becomes part of the everyday use. First it would have to be recognized as a separate well rounded profession that can bring added value to sustainable development on the long term. Then it would have to ensure a chance for the future generations by having and integrated training programme, encompassing the many inter disciplinary aspects. Last but not least it would have to gain official support in form of strategies and funding so specifically targeted projects could be accomplished.

Existing policies and legislation for conversion sector

Policies and legislation for the conversion sector in Romania exists as a part in the whole Spatial Planning and Urbanism sector. Romania had a slow but steady start towards the Sustainable Development idea, after the heavy industry based communist era. The post 1989 era was one of learning and implementing a new way of thinking about spatial development of

the country as a whole. At the end of 1995 a new law regarding Environmental Protection was ready to be implemented. Law no. 137 of Environmental Protection had at its foundation the aim of ensuring sustainable development through a series of strategies. This law however did not establish the legal framework in which the strategies will operate. The law guaranteed the fundamental right of the people to a healthy environment. It was until many years later that this law was succeeded my it's new version.

On December 22nd 2005 a new Government Emergency Ordinance number 195 included many sectors that needed completion through specific legislations and policies:

- updated Forestry Code, approved by law number 26/1996
- updated Water law number 107/1996
- nuclear activities law 111/1996 revised and updated
- cynegetic and wind protection law 103/1996 revised and updated
- Government Emergency Ordinance number 243/2000 referring to atmosphere protection
- Government Emergency Ordinance number 236/2000 referring to natural areas, natural habitat conservation, wild flora and fauna preservation
- Law no. 192/2001 regarding live water resources, fishing and aquaculture

Starting with 1999 National Adherence to the European Union Program was adopted, revising its environmental components year after year, until 2003. In 2007 after Romania became member of the European Union the Ministry of Environment and Sustainable Development drafted a series of strategies and directions regarding the conservation and sustainable development of the environment. This validated the fact that Romania had to sustain and further develop its environmental policies even after achieving the adherence to EU.

In 2010 the law of renewable energy for Romania was finalized and adopted. This represented a big step towards the future development of the construction, housing and energy management market in the country. The aim outlined by this law was that Romania should achieve 24% renewable energy consumption nationwide by 2020.

National strategy, plans and other approved documents covering the conversion sector

The latest document prepared by the Ministry of Environment and Sustainable Development is entitled "Romania`s Sustainable Development Strategy New Horizons 2013-220-2030", which aims to fully switch the country`s philosophy towards sustainable development. 2013 horizon aimed to incorporate the principles and practices of sustainable development in all of Romania`s national programs and policies as a member of the EU. 2020 horizon aims bring Romania to other European Union members' medium level indicators regarding sustainable development. 2030 aims to further develop the sustainable conversion sector of the country, significantly catching up to the other EU countries.

This document represents the result of a joint effort from the Romanian Ministry of Environment and Sustainable Development and UN`s Development Program, approved on 04 October 2007 by Government order no. 1216.

Another important document regarding sustainable development is the "National Development Plan 2007-2013 (PND)" which was made for annual strategical planning and multi annual financial distribution regarding economic and social development of the country, according Cohesion Policy of the European Union. The 2007-2013 National Strategic Reference Framework, approved on June 25 2007, establishes the main priorities of the European Regional Development Fund, European Social Fund and Cohesion Fund. Furthermore this helps to develop links between priorities of the National Development Plan 2007-2013 and EU Strategic Orientations from the revised Lisbon Agenda.

Laws governing the conversion sector

Conversion sector in Romania does not exist as “Conversion Sector”, but rather falls under the “Sustainable development”. Focus on reconverting already used territories is small; this is rather treated as part of the whole “Development for the future, through conscious use of resources”. Public and private organizations alike try to use the existing resources that is has minimal impact on the existing resources. The process of is called spatial panning and is governed by Law no. 350/2001 on urban and spatial planning that is specifying that economic, social, ecological and cultural policies have to be taken in consideration nationwide to assure balance in development.

To encompass the multitude of aspects that factor in development and synthesize the strategic programs on medium and long term the National Spatial Plan (PATN) was created, having several specialized sections:

- Section I – Roads, approved by Law no. 71/1996
- Section II – Water, approved by Law no. 171/1997
- Section III – Protected areas, approved by Law no. 5/2000
- Section IV – Settlement Networks, approved by Law no. 351/2001
- Section V – Areas prone to natural risks, approved by Law no. 575/2001
- Section VI – Tourism zones, approved by Law no. 190/2009

There are also two more sections that are waiting for approval:

- Section VII – Infrastructure for education
- Section VIII – Rural areas

The National Spatial Plan establishes some sort of guidelines for developing local and regional land use planning in accordance to the needs of the territories. With the National Development Plan having a short term scope, the National Spatial Plan has a much broader and longer term (year 2025 as opposed to 2013 in the case of National Development Plan).

In order to suffice these needs Romania has to restructure its industry sectors, which inevitably will lead to a higher degree of urbanization. It is estimated that Romania, after implementing these changes will have a sharp increase in urbanization (56, 2% in 2000 and 66, 9% in 2025), an increase of 1,1 million rural dwellers becoming part of the urban population. The majority of these changes will result from rural areas becoming urban areas.

Another priority, outlined first by the National Development Plan is that, private companies and other organizations to introduce in their products and services a higher added value, through rational use of natural and human resources alike. This will be achieved by revamping the industrial production according to standards that involve less pollution and more attention towards protecting the environment. Regarding the environment, the EU proposed some relevant directives for Romania as how it can achieve a better environmental quality by the end of 2015. In addition to this, EU proposed that the water quality can be improved by:

- appropriate treatment of used waters for a minimum of 250 areas, encompassing a total of 10.000 inhabitants, representing 62% of the total biodegradable load by the end of 2015;

- ensuring the quality of drinking water, according to EU standards in all urban areas and rural areas of 10.000 inhabitants by the end of 2015;

Improving land quality by:

- shutting down 80 municipal landfills that are not complying to the EU standards, greening the affected areas by reducing the stored waste, recycling the recoverable

waste, separation and proper waste management of hazardous materials and prevention of surface water entering into the landfilled waste;

- rehabilitation of contaminated land with high pollution;

Protection of air quality in the most exposed zones by:

- Upgrading heating systems in public sector buildings that have a high degree of pollution;

Improved management of natural resources for sustainable development through:

- Applying new management plans in protected areas of national interest (Natura 2000 network);

- Designing protection structures against natural disasters, especially against flooding in the most exposed regions prone to these.

All these objectives are designed in such a way to be coherent with EU and national policies. For example Directive 98/83 regarding water quality intended for human consumption can be also found in the National Development Plan under Sub priority 3.3.1 Improvement of living standards by providing public utilities to the required quality standards, in water and waste sectors (development of infrastructure systems for drinking water) and 3.3.2 Improving sectoral environmental management systems, this is also a part of EU Directive 200/80 regarding large combustion installations (air quality improvement).

Priority number 5 of the National Development Plan has 3 main priorities to take into consideration regarding sustainable development of rural areas: economic, social and environmental. Sub priority 5.3.3 of this establishes a few guidelines that involve rational use of land, local resources, modernizing farms but also development of services in rural areas. In urban areas the main focus is on modernizing and rehabilitating infrastructures such as schools, hospitals and other public safety institutions. Priority number 2 and 3 involve many actions

targeting the urban areas, especially the Development and modernization of transport infrastructure and Protecting and improving environmental quality. The sub priorities will focus on supporting urban comprehensive approach aimed to increase economic and social role in the development of urban centers in their respective Regions.

Conclusion

"Conversion Sector" in Romania is a term that is not well known even in the policies and laws governing development. This term falls under "Sustainable Development" category as mentioned in numerous national and EU documents. Sustainable Development has numerous sub categories, from renewable energy to optimal territory use for the future generations. Many of the existing buildings that are now not used still pollute the environment. Only a fraction of these buildings are renewed for people to find a better use for them. Other buildings, such as 4 to 10 story apartment blocks are constantly refurbished ether from government funds or just simply by money raised by the residents themselves.

On the other hand, Romania has big changes planned by 2020; this can be seen from the national and EU policies and laws that cover the development of the country. Buildings that are constructed now are all in accordance to new standards, constantly getting better and more environmental friendly. However this is still far beyond what other western EU countries are achieving, mostly because in Romania renewable energies are still considered something "new and expensive". For example, despite the fact that there is a great potential of getting 1.200 GWh solar energy per year, the lack of regulations to support this result only in a few demonstrative projects with no specific targets. Aeolian (wind) energy has a potential to create 4.500 GWh/year, however the problem that specialist face here are the lack of proper equipment that is needed to develop a network throughout the country. Hydropower is probably the most used recently developed renewable energy source for the country, having the Danube as its primary source of water along the south. Despite this already existing equipment

there is still a great need for more projects to further stimulate the use of hydropower. Other renewable energy potential in Romania lies in biomass and geothermal energy, the only problem is that only general objectives for the future are laid out, not any specific objectives for future development.

1. Funding for conversion sector

2.1 State aid scheme for ensuring sustainable economic development

Romania is a member state of the European Union since January 2007. Since then, the government with the European Union support is trying to solve the problems our country is facing. The major issues are related to the Romanian standards of living, including both economic and social problems. This is the reason why the main financing opportunities coming from the government of Romania with European funds support are most often dedicated to solving social and economic gaps. In terms of a national programme covering activities in the conversion sector, the government is paying more attention to this, especially when it comes to the new Multiannual Financial Framework 2014-2020.

Until now, Romania, through European Funds, had several ways of financing initiatives coming from local and national authorities for urban sustainable development. Here are some examples:

A. European Regional Development Fund (ERDF) – infrastructure projects, investment to create new jobs, Investment Research and Technological Development, local development projects, aid for SMEs.

B. Regional Operational Programme Priority 1: Supporting sustainable development of cities - urban growth poles under the Integrated Urban Development Plans projects in the following areas:

- Rehabilitation of urban infrastructure and improving urban services, including urban public transport.
- Sustainable development of the business.3.
- Rehabilitation of social infrastructure, including social housing and improvement of social services.

C. URBACT II Interregional Cooperation Programme - Meeting the information needs in the process of increasing the efficiency of urban development policies, which all European regions are helped to adapt to the future development circumstances.

In Cluj-Napoca, there is one very good example of local initiatives which converted an old and unused building and transformed it in a cultural center. Casino – Center for Urban Culture is the old Casino located in the Central Park of Cluj-Napoca, an eclectic palace inspired by Viennese architecture, which now hosts cultural and artistic events of Cluj. The monument has served as the Casino, Museum, School of Fine Arts and Restaurant. Rehabilitated by the City Hall of Cluj-Napoca, with the financial support of the European European Union through Regional Operational Programme in 2012, the Casino represents today a place for cultural events and projects.

One of the instruments through which the government is planning to support the sustainable development in Romania is the State aid scheme for ensuring sustainable economic development . The three main areas of funding are:

- Section A - Agriculture, forestry and fishing;
- Section B - mining and quarrying;
- Section C - manufacturing.

3.2. Public-private partnership in conversion sector

Even if at national level, there are no major public-private partnerships; Romania is receiving support through EEA Grants, supported by Iceland Liechtenstein and Norway. In Romania, they have a partnership with the Civil Society Development Foundation. Through this partnership they have create the ONG Fund of Romania. Civil Society Development Foundation together with its partners: Romanian Environmental Partnership Foundation and Resource Center for Roma Communities is the Fund Operator in Romania, being entrusted to implement the Non-Governmental Organisations Programme. The overall objective of the NGO Fund in Romania is "Strengthened civil society development and enhanced contribution to social justice, democracy and sustainable development" and shall contribute to the overall objectives of the EEA Financial Mechanism to reduce economic and social disparities in the European Economic Area and to strengthen bilateral relations between Romania and the donor states Iceland, Liechtenstein and Norway. The Programme will contribute to improving governance in Romania by encouraging citizens' active participation, NGOs effective and extensive involvement in policy debates and specific measures such as those looking at corruption and rule of law.

3.3. Other initiatives of other sectors addressing conversion sector

A. Tara lui Andrei – an initiative by OMV Petrom Romania is a project conducted in partnership with PACT Foundation. This project encourages sustainable initiatives Romanians who want to support the community to develop. The program aims to support sustainable development of local communities throughout Romania and Romanians encouraging the spirit of initiative that will sustain communities in Romania to produce good changes from within.

B. Tranzit House

Today the Tranzit Hous is a major place for cultural activities in Cluj-Napoca. But few people know that this building has a great history. All the information about the Tranzit House can be found on its website www.tranzithouse.ro. The former “Poalei Tzedek” synagogue in Cluj was rented from the Jewish Communities Federation. Until 1974 it has functioned as the synagogue of craftsmen, and then it was used as a storehouse. Due to the lack of proper care the building has been gradually degraded in a short period.

The concept of reconversion came from the idea of symbolic interpretation of the space that leads to giving form to its architectural shape. From the first manifestations (We and They - 1997, Passer-by - 1998), artists have sought to define the meanings of the emptied space of the synagogue. The artistic approaches raised the idea of the reconstruction of the space of Tranzit in an integrative manner, in the urban landscape of Cluj, as the building of Tranzit House is part of a whole architectural complex.

Conclusion

Even if in Romania there is still a lack of support from the government for the initiatives for sustainable development, especially in terms of conversion of public sites, in the last years we have seen many private initiatives rising and transforming public buildings into cultural centers for the community.

We have seen great initiatives coming from local authorities to convert public unused spaces; we have also seen private initiatives that have become great examples of the public conversion sector. The main motivation is the social impact of these reused buildings and most of them become social centers or are dedicated to cultural activities in urban areas.

The Multiannual Financial Framework 2014-2020 has to bring more initiatives for sustainable urban development and sustainable development in general, since these terms have become more popular in the past 4-5 years.

Conversion sector development trends in Romania

To get a better picture of the future development of the country in 2008 there was a new document written by the Government and the Sustainable Development and Environment Ministry in collaboration with the UN program for Development and National Center of Sustainable Development, called the "National Strategy Sustainable Development of Romania new horizons 2013-2020-2030". Another important document that can tell us about further trends and development strategies of the country is the Territorial Development Strategy of Romania –Polycentric Romania 2035; Territorial cohesion and competitiveness, development and equal opportunities for people, written in 2014.

Challenges, issues and concerns faced by the conversion sector

Territorial Development Strategy of Romania features a detailed SWOT analysis of urban areas. The challenges, issues and concerns that have an impact on the conversion sector and the sustainable development are:

- the economic and social polarization trend generated the capital city - Bucharest;
- vulnerability of a high number of small towns that are mono-functional after the 1989 economic restructuring;
- the drop and aging of the urban population;
- formation of landlocked areas within the city, favoring social segregation;
- many areas affected by extreme poverty;
- the phenomenon of urban sprawl affecting large cities;
- lack of green protection belts around cities;

- lack of green spaces;
- many of the new urban development (individual homes) are not connected to utility networks;
- closure of 60 hospitals in 2011 (mostly in small towns);
- many urban areas do not meet the indicators established by Law no. 351/2001, amended and supplemented in terms of specific minimum equipment;
- lack of connection and adaptation of new construction areas to major transport systems;
- lack functional conversion of large industrial and ex-military areas;
- decrease in the number of nurseries and kindergartens;
- degradation of the built in historic areas;
- lack of unified national land register;
- many cities have expired or old fashioned urbanism documentations;
- insufficient administrative capacity by poor management structures;
- inappropriate institutional cooperation and poor quality of service provided to the citizens;
- high concentrations of CO2;
- lack of programs and funding for small towns under 10,000 inhabitants;
- lack of coordinated settlements (cooperation rural-urban areas and between urban-urban areas), this will inevitably lead to an unsustainable and chaotic development;

- Lack of specific interventions in various areas of the city (conversion, green spaces, etc.)
- low capacity for strategic planning of local governments;

Trends in the development in the conversion sector

The first document mentioned above outlines some concrete objectives within a reasonable amount of time in which the country could achieve added value towards continuous improvement of environment friendly living standards. For this there were 3 specific target dates in which certain criteria's have to be met, but this also meant that certain trends and changes have to be followed in the future development of the country. Horizon 2013 proposed the natural incorporation of the EU principles and practices in all programs and policies that govern the development of Romania. This strategy would help to increase the overall GDP of the country, which at the end of 2013 should have been above the European average level. This has to develop further, so by 2020 it has to approach 80% of the EU average and even more by 2030.

This long term strategy outlines a few key sectors that will help adopt and implement sustainable development principles, such as:

- natural capital support;
- modernization of educational, professional development, public health institutions having in mind unfavorable demographic evolutions and the labor market;
- use of the best available technologies, economically and environmentally, in the investment decisions of public funds at national, regional and local levels and stimulate such decisions by private capital;
- entrenchment of eco-efficiency in all production and service activities;

- anticipating the effects of climate change, to prepare solutions for adaptation in the long term, as well as contingency plans for inter-sectoral measures comprising portfolios of alternative solutions for crisis of natural or anthropogenic situations;

- ensuring food security and safety by making Romania's competitive advantages in the development of agricultural production, including organic production;

- balancing the quantitative and qualitative growth of agricultural production to ensure food for humans and animals with the higher demand for biofuel production without compromising the need to maintain and improve soil fertility, biodiversity and environmental protection;

- the need to identify additional sources of funding in terms of sustainability, the development of projects and large programs, especially in infrastructure, energy, environmental protection, food safety, education, health and social services;

0- the protection and enhancement of natural and national heritage;

- Connection to European norms and standards on quality of life should be accompanied by revitalization in a modern, some traditional ways of life, especially in mountainous areas and wetlands.

The above mentioned objectives are achieved by the proposed timeframe by having several documents proposing specific changes. One such document was the National Development Plan 2007-2013 (see chapter 2), that integrates a few changes regarding infrastructure. Among other perspectives, it states that the inter- and intraregional disparities should be reduced first and foremost by improving the performance of local administration, public infrastructure, natural and cultural heritage protection, integrated rural development, urban regeneration areas affected by industrial restructuring and strengthening the business environment.

E. Sector development trend study Bulgaria

1. Overview of the conversion sector in Bulgaria

The topic of converting public sights and buildings is still relatively new in Bulgaria. It has been mainly related as a type of urban planning, considering only the urban landscape and planning of the cities.

From the data available, it can be concluded that by conversion sector in the case of Bulgaria is understood certain type of urban planning activities, as well as sustainable development in terms of energy efficiency. There are no concrete strategies on national level of development on this level, rather than EU projects and programs, which are focused on the urban development in general.

The overall profile of the sector, made from the survey described the complex placement of the sector in the local and national agenda. It has been understood as part of the environmental sector, as well as the urban development and the energy sector. Due to the funding of such activities, which on average is a part of the European Commission's programs, this sector is often related and understood as a part of project planning and development.

As for the findings for this sector, it is visible from the results of the survey, that the private investment is something not common in this field, even when it is regarding public-private partnerships. Apart from the European Union funding, the next popular source are the local authorities. From the results it is visible that this type of activities are rather delegated from the central government to the local bodies.

Having in mind that the conversion sector has not yet become an integrated part of the planning on national, regional and local level, it is rather hard to describe its main features. Therefore the profile, of the professional which main focus will be the conversion sector, is also rather

complex and hard to define. It is not clear wheatear such figure will be in charge of the planning in this sector, or he will be involved with practical issues of the converting. In any case, the thing which becomes clear is that such person should not have specific focus only on infrastructure, energy or environmental issues, rather than a overall approach of all. Such person should have perfect communication skills, as well as abilities to plan, to be aware with the legislative frame and the urban plan for development.

In conclusion, the conversion sector is yet to be integrated in Bulgaria, as at this moment it is covering the necessities of many different areas, without having a concrete action plan on its own.

2. Existing policies and legislation for conversion sector

As already mentioned, there is no integrated conversion sector in Bulgaria at this moment. Therefore all the policies and legislation, which have been adopted in order to regulate this field, is mainly regarding the sustainable development and urbanization. In any case, in order to segregate specific conversion sector and the main government actions towards it, it is important to define the different types of public property, which can be converted under different legislative frame.

In this regards, the two important laws, defining the type of public property are the State property law and the Municipality property low. Each one of them regulates the specifics of the type of property and how should it be used.

The next level of legislation, related to the conversion sector is the Low on special planning, which regulates planning of the territory in Bulgaria, along with the public-private relations in this manner. It gives the general framework in which converting of public areas can be done in practice and the specifics of the territory.

Other part of the legislation, which should be mentioned is the Law on energy efficiency and Law on managing waste, which have indirect impact on the conversion sector.

As for the policies, existing in this manner, the majority of them are implemented on local level, regarding the sustainable development of concrete municipality. As these activities are more commonly developed on local level, there are no policies on government level, which define the practices of converting public spaces.

As for the concrete policies, which are put in action, again they are made mainly on municipal level. Another important issue, regarding this topic is that there is no integrated structure in the regional governance in Bulgaria. Therefore the existing polices on regional development are mainly based on agreements between municipalities or national strategies.

The policies, which are integrated on state level, are implemented by the Ministry of environment and water in Bulgaria (MEWB), as well as the Ministry of regional development and public works (MRDPW). Among the policies, adopted by MEWB, are Environmental protection act, Waste management act, Protected areas act and Clean ambient air act.

As for the MRDPW, the adopted policies, regarding the regional development and the management of water waste.

2.1 National strategy, plans and other approved documents covering the conversion sector

Due to the fact that there is no integrated conversion sector in Bulgaria, the strategies and plans, which focus on this field are again related to the general urban and sustainable development, as well as different environmental issues, such as renewable energy and water waste.

The National program for sustainable government of the lands and preventing the desertification of Bulgaria 2014-2020 focuses on both natural and human factors of the

desertification. It focuses on the urbanization, as a factor of soil malfunctions, agriculture and preserving the bio variety on the territory. One of the aims of this plan is to regulate the urbanization process, in order to preserve the soil for agricultural needs. The expected outputs are aimed at development of urban environment, witch does not have negative effects on the agriculture and does not have consequences, harmful for the ecology.

National strategy on the environment 2009-2018 is already in action. It's main objectives are based on the idea of sustainable development and the integrating the environmental issues in the regional policies. Other objectives are improving the environment for better standard of living, encouraging sustainable consumption and production.

National strategy for regional development 2012-2022 describes each and every region separately so that it can develop individual approach for each region's development. The main aim is to lead the different regions to sustainable growth and efficiency in terms of use of recourses.

The rest of the strategic documents are based on municipality level. Each one of the municipalities has its own strategy for governing the public property and its development. The different strategies all have in common their desire to reach sustainable form of development, appropriate use of its property, energy efficiency and waste management. The specifics vary according to the different needs of each municipality, depending on the location, the touristic sights, the access to heavy industry and agriculture.

Apart from the planning the use of public property, another document which every city and municipality has is its urban development plan. It regulates the type of buildings, the sizes of the parks, the distance from the industrial parts and the space between the different buildings. As there is no national regulation on this issues, this decisions have been delegated on municipal level.

2.2 Laws governing the conversion sector

The legislative system, which governs the conversion sector is based on national level and its aim is to ensure subsidiarity between the government and the municipality, in order to ensure the freedom on local level.

According to the State property law, there are two types of state property- public and private. Public state property are objects and properties of art. 18, paragraph 1 of the Constitution of the Republic of Bulgaria, defined by law as exclusive state property, objects and properties defined by law or by Council of Ministers on public property, chattels defined by law or by Council of Ministers on public property, property made available to agencies for the performance of their functions, properties of national importance for meeting public needs of national importance by public use determined by the Council of Ministers, regulated plots allocated for border checkpoints, and buildings built on them .

Private state owned all the property and chattels - state property. Fruits and revenues from real estate and chattel, public property, private property of the state, real estate and chattel of companies and legal entities profit, even if the state was the sole owner of the property transferred to them are not public property.

In this regard, the state is in charge of their management, collecting of their fruits and preserving them.

According to the Municipal property law, municipal property is the property and assets determined by law, the property and assets provided in the property of the municipality by law, properties, whose property is restored to the municipality under the terms and conditions specified by law, the property and assets donated or bequeathed to the municipality, the property and assets acquired by the municipality with volunteer labor and / or cash of the population, property and assets acquired by the municipality in the liquidation of companies with municipal participation, property and assets acquired by the municipality through a legal transaction, prescription or otherwise specified in the law.

Both of these type of properties can be transferred and converted, according to the planning on government level and the needs of the society.

The Low on special planning guarantees the circumstances under which one can manage their private property, the size of buildings which are available and the different types of buildings. It regulates the sizes and the types of green spaces in the urban areas. It regulates the infrastructure in the urban areas, as well as the water supplies and the collecting of waste.

Unlike the other municipalities, the Sofia municipality has a specific law, which regulates the urbanization of the municipality. It regulates the planning of the municipality, the central area and the peripheries, as well as the type of green spaces, the water supplies and the specific requirements for the real estate in the municipality.

3. Funding for conversion sector

For all the activities, which cover the field of the conversion sector, there are several levels of funding. Generally they can be divided into 3 groups, depending on the source of the funds. The three levels are : European level, national, regional and local level and individual level or private funds. Each and one of them contribute to different activities and expect to achieve different outputs.

3.1 National and local programmes covering activities in the conversion sector

As it was already mentioned, there are no integrated institutions on regional level, therefore the funding is possible only on national and local level. There are very few programs, which are being funded from the municipality budget. In the majority of cases described, it is the case only of a single act, which have taken place.

National program “For clean environment- 2015” – the designation of this program is namely for schools, kindergartens and child centers. It’s main objectives are dedicated to education on ecological issues and sustainable development for children. The abovementioned institutions have to present their projects and the financing, which they are going to receive is 5000 BGN.

Project “Beautiful Bulgaria” Measure M01 “Improving the social environment in settlements” - Measure M01 "Improving the social environment in the settlements" is aimed at supporting the development of sustainable, connected and accessible public environment to enhance the competitiveness of the settlements and to provide conditions for successful development of urban areas.

Under the measure M01 funded CMP / CPP buildings or individual units thereof which are public service in the field of administration, culture and the arts, religion, transport and communications, sport and social tourism. The measure is financed and LDS / CPP objects from those areas that have the status of immovable cultural value, but on the condition that their owners use them directly and not rent them and / or that they do not need additional conservation and restoration works after their renovation project "Beautiful Bulgaria".

In M01 measure can be financed and adjacent outdoor spaces of these buildings, but within the regulated landed property in which they are located.

Eligible applicants under measure M01 municipalities and regional governors, state institutions and supervisory bodies, religious institutions (incl. Church boards) and community centers listed by the competent authorities as legal entities. They must be owners of the offered sites or delegate their management and control.

3.2 Public-Private-Partnership in conversion sector

In this case there is a lack of experience and successful stories, which can be described. In the survey, which was made during the COMPASS project in Bulgaria, non of the respondents have said that the private investments are source of investments for the conversion sector and the 3.1% of the responses, which have stated that a source can be public-private partnership have not mentioned a particular case for this type of funding. Still, there is a public-private partnership, which is connecting public sights with art. The project is involved in the re-paint of different buildings with various pieces of art.

Urban Art Foundation- Private foundation, which supports different projects, involved in the reconstruction of the urban sights. At the moment, it supports project “Urban Creatures”, which re-paints undergrounds, blocks of flats, etc.

3.3 European level

European funding is available under different calls and programs. It can be part of the Operational programs, or other type of support related with the European Commission. Here bellow some examples:

- Cross Border Cooperation Programme INTERREG VA Romania - Bulgaria 2014-2020- A total budget of 258,4 million euro (215,7 from the European Regional Development Fund) is now available for 7 counties in Romania (Constanța, Mehedinți, Dolj, Olt, Teleorman, Giurgiu, Călărași) and 8 districts in Bulgaria (Vidin, Vratsa, Montana, Pleven, Veliko Tarnovo, Ruse, Silistra, Dobrich). The border area will be improved by joint projects, with cross-border impact. Five priorities axes (except technical assistance priority axis) will finance projects in areas such as: sustainable transport, protecting the environment, promoting climate change adaptation, risk prevention and management, sustainable and quality employment, enhancing institutional capacity of public authorities and stakeholders.

- Operational program “Regional growth” – Priority axe 1: Sustainable integrated urban development- The axe is aimed at improving the urban sight by improving the infrastructure, environment and developing the standard of living.
- Integrated plans for urban regeneration and development for 2014-2020- the involved municipalities in this programme are Bourgas, Silistra, Pazardjik and Svishtov. The main objective of the programme is to provide integrated, sustainable planning of urban development of the towns. The specific objectives of the project are:
    - Formulating a vision for development, with broad participation of stakeholders from the local community, to permanently improve the economic, physical, social and environmental status of individual urban areas and the cities as a whole .
    - Develop a comprehensive and targeted problem analysis of the current situation of the urban area to identify problems and its growth potential;
    - Identification and validation of three areas of impact, at least one of a social nature.
    - Ensuring the necessary plan basis for sustainable development of the towns and achieve long-term vision for the city.
    - Development of an integrated plan for urban regeneration and development for 2014-2020 and the necessary detailed plans for areas of influence;
    - Developing detailed technical jobs, investment projects, with a view to planning the implementation of specific intervention projects within selected areas of impact.
- Regional urban development fund- The European Commission (“EC”) and the European Investment Bank (“EIB”) have developed an initiative for supporting urban development. Through JESSICA financial engineering instrument, Bulgaria is provided with the opportunity to allocate part of its EU Structural Funds for investments in projects forming part of relevant integrated plans for sustainable urban development and regeneration (“Integrated Plans”).

The Regional Urban Development Fund AD (the "Fund") has signed an Operational agreement with the EIB. The Fund scope of activity is investment in urban development projects ("Projects") in the six largest Bulgarian cities outside Sofia, namely Plovdiv, Varna, Bourgas, Stara Zagora, Rousse and Pleven (the "Cities").

4. Conversion sector development trends in Bulgaria

The information presented is going to be extract by the Bulgarian survey on conversion sector development trends, under the COMPASS project.

4.1 Challenges, issues and concerns faced by the conversion sector

The biggest challenge for the conversion sector in Bulgaria is related to its integration as a part of the public agenda. At the moment it's existing mainly as a part of other sectors, such as ecology, urban planning and regional development. This prevents the sector of having concrete policy for its development. The lack of concrete policies in this sector leads to the misunderstanding of the term in general. It has yet to enter as an existing part of the public life and to be understood as an important topic.

But the fact that such sector has not been integrated yet does not mean that the problems, on which it is focusing are not existing. At this moment in Bulgaria there are more than 70 000 panel and large-panel formwork block of flats with urgent need for remediation. Their remediation will save up to 55% of the expenses for electric power supply .

On the other hand the developed conversion sector would be essential addition not only for the urban development. In terms of industrial parts, there are still large territories, which at this moment have no practical use. The challenge is the lack of data regarding this type of industrial sights and factories. Another issue is their form of property. As it was mentioned before, the converting of sights can be possible in case the property is public. If the sight is owned by private owner, there is no legislative way his property to be converted without his legal

permission. In case the owners are more than 1, all of them must agree to participate in this actions.

Energy efficiency is another challenge for the conversion sector.

The main challenges that has been identified for Bulgaria concern funding. The main concern grows from the fact that the majority of programs have in some manner relation to the actions of the European Commission. It is rarely the case when the programs for conversion are funded by the republic or the municipality budget. This grows into low support on a national and local level, as well as private initiatives.

5. Trends in the development in the conversion sector

The trends which are becoming noticeable are mainly in the field of energy efficiency and urban development. In this cases there is a growing interest in the conversion sector as it helps the development of the standard of living and the requirements of environmental awareness.

On the other hand, 56.3% of the responses in the survey have noticed that specific trends exist in the field of infrastructure. By infrastructure in this case, the respondents refer to specific actions, which are strengthening the logistics within the municipalities.

Popular explanation for why such trends exists is that the type of funding which is available, often is related to specific actions. Therefore some of the responses state, that the trends exist due to the operational programs, which are available at this moment.

Apart from the European type of funding, another popular trend is related with the condition of the block of flats in Bulgaria. In the majority of cases this building need remediation. This actions are highly important as their increase the quality of the buildings as well as decreasing the level of energy waste in terms of heating.

For improving the urban sight in general, there are many active programs for re-innovation of the underpasses thanks to different types of art. As it is the case of the relies of a “music underpass” in Sofia in 2015. The initiative is of a group of young people, students of architecture, urbanism and directing, united under the name "underpass". With two thousand. BGN provided by the Fund for Innovation in Culture ", they cleaned the walls of subway graffiti, turncoat stairs are like piano keys, fitted with decorative giant speakers and audio tapes.

Turned walls stave with notes and records, made music orgafon combination of organ and xylophone made of water pipes, which can play for. In the subway now has a stage for concerts and also a place to play folk dances within the initiative "Taratantsi."

The main purpose for this trend, in terms of including art in the re-innovation of blocks of flats, underpasses, even electric boards, is related to the general conversion of the often unpleasant urban sight into a place for creativity and inspiration.

II. Occupational and training perspective analysis

According to the survey realized in the five countries, there is a growth in the job opportunities for the sustainable conversion sector. As shown in the figure bellow, 45% of interviewees believe that job opportunities have increased in the sustainable conversion sector in the past years.

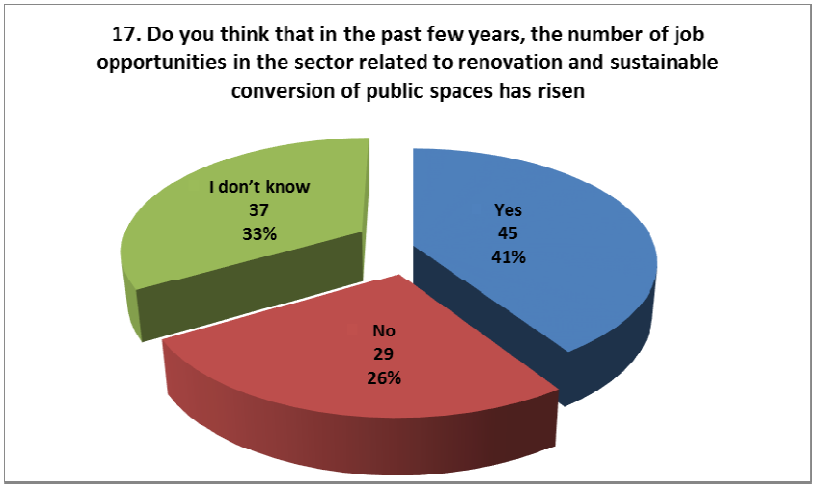


Figure 6: interviewees' opinion on the developmentof job opportunities in the sustainable conversion sector

New job opportunities are strongly related to specific technical skills. In general, new market needs led to the creation of new profession al profile, combining both technical and managing skills as successful in the sustainable conversion sector.

From the information gathered with the survey it appears that professional competences most needed today for the development of the sustainable conversion sector are: technical competences (21%), participatory planning (13%), entrepreneurship (12%), fundraising (12%) and social analysis (12%).

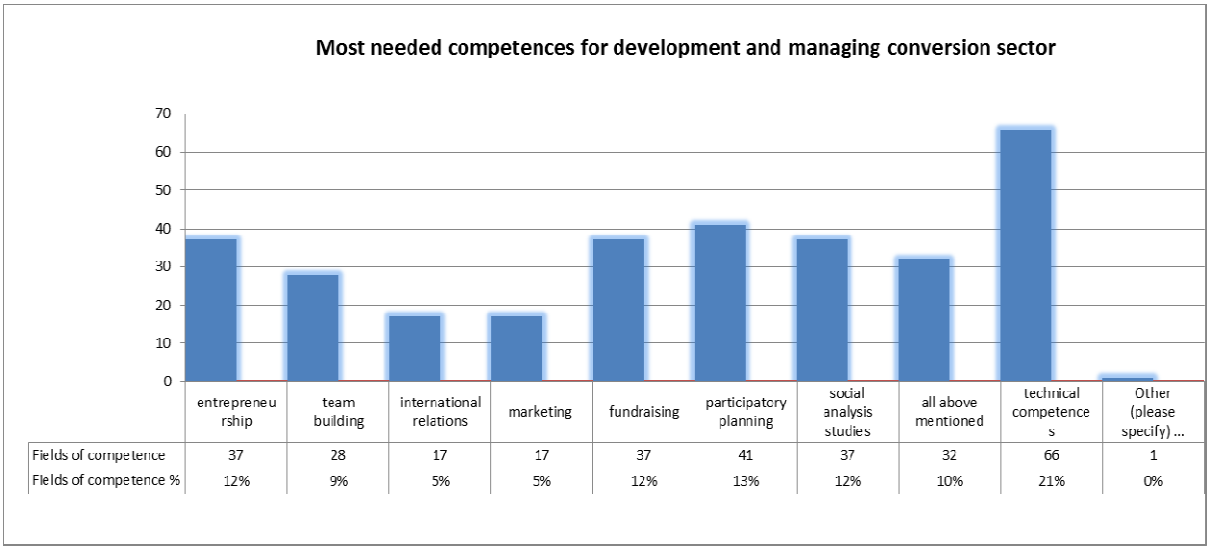


Figure 7: competences most needed for the development of the sustainable conversion sector as identified by interviewees

Regarding education opportunities, it appears that there are, in the interviewees knowledge, few education programmes focusing sustainable conversion projects development and management.

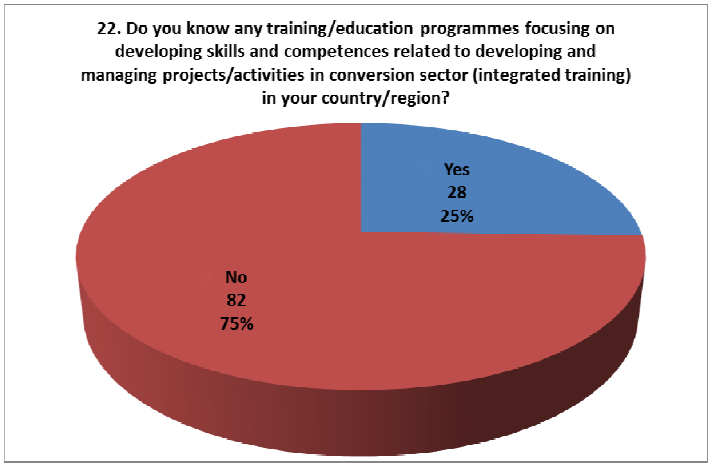


Figure 8: existence of specific education programme on sustainable conversion prokect development and management in the interviewees knowledge

From the survey, it also emerged that integrated training regarding sustainable conversion is most needed and that it would support the development of the sector.

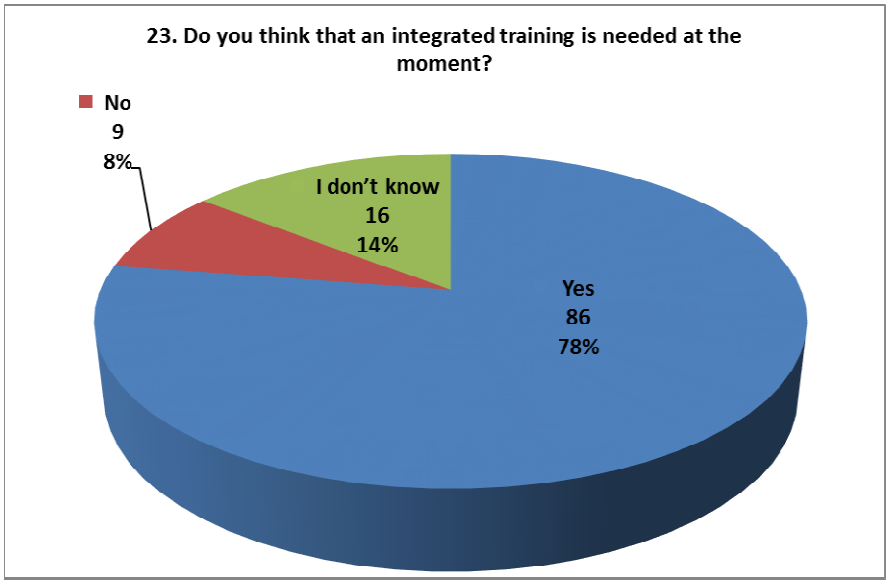


Figure 9: interviewees view on the need for integrated training on sustainable conversion

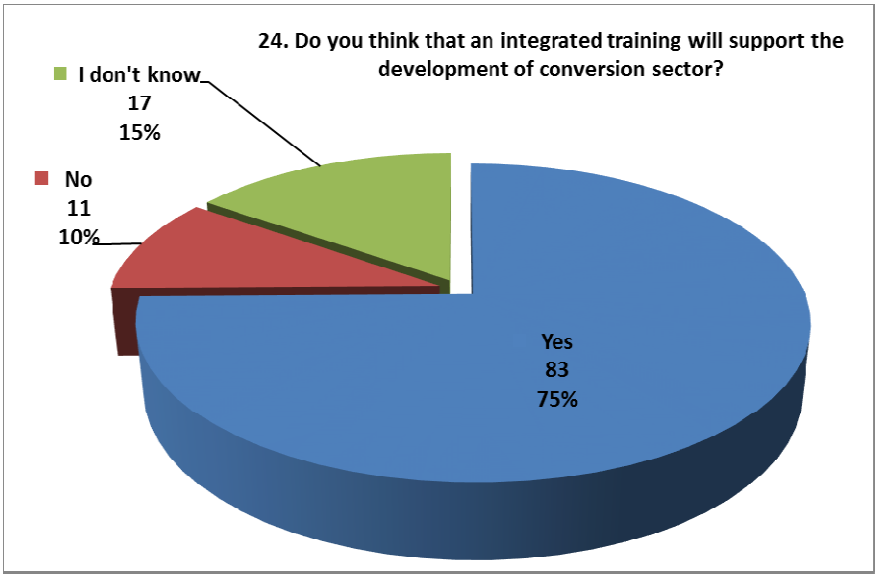


Figure 10: interviewees view on the importance of integrated training in support to the development of sustainable conversion sector

A. Occupational opportunities and training needs in Italy

Under this section we investigate the occupational perspectives in the conversion sector. We should answer are there special conversion sector specialists, professions, education in this sphere.

1. Existing professional profiles related to conversion sector

With the term green jobs are generally indicated all the professions in the industry and services sectors which adopt "ecological" solutions.

The United Nations Environment Programme (UNEP) defines green economy the one that aims at "improving human well-being and social equity, while significantly reducing environmental risks and ecological deficits".

Moreover, according to the ILO (International Labour Organization) and UNEP definition, the green jobs category includes all the work activities that in the agriculture, industry and services sectors contribute in preserving or rehabilitate the quality of the environment. It also specifies that it does not refer only to those jobs directly associated with specific areas of sustainability but also to those related to the efficiency, quality and innovation of goods and services offered looking at a green perspective.

On the other side are defined as "hybrid" the professions whose work is not directly aimed at producing green goods and services or at reducing the environmental impact of the productive cycles, but which can provide know-how in companies working in the “green sector”.

In Italy the people employed in the green sector (both private and public), according to the above definition - are more than 3 million.

In 2013, there have been 52 thousand hiring, both in non-seasonal and seasonal jobs, which represent the 9.2% of the hiring in the whole job market. Analysing the specificity of the sector, 47 thousand of the hiring were non-seasonal (the highest rate in the last five years).

Most of the green jobs origins as an evolution of existing professions; rather than the creation of new professions we see an integration of new skills and practices on pre – existing professional figures.

Some sectors more than others are generating demand for green jobs, here the ones that are facing a significant improvement:

1. 1 Integrated waste management

The evolution taking place in the waste management has opened new job profiles; where in the past the central figure was the one of the garbage man, and in addition the operator of compacting machine, now the waste has become a complex system that requires different figures and different skills, some of which characterized by innovation and creativity: from the know how on the functioning of technological systems (reception facilities, treatment and recovery, energy plants, biodigesters), to the implementation of communication campaigns for citizens called to contribute to the collection; from new companies that organize the refitting and re-use of the goods otherwise destined for landfill, to the experts in the remediation of contaminated areas; from the eco-designer, that imagine the products in order to minimize the waste at the end of its life, to those who invents app and microchips for the traceability of waste. A changing world that needs always higher skills and professionalism.

Specific profiles connected to waste management sectors are: the Ecodesigner, Trainer of active citizenship/communicator, Site manager for waste reuse, refitting technician, technician

of treatment and recovery plant, expert of integrate management, technician for energy-waste plant, expert in biodigester or agro-energy plants, expert of the remediation of contaminated sites and landfills.

1. 2 Sustainable building

The construction sector is one in continuous and profound change and brings with it a great of potential for new professions. As an example the energy quality of the buildings is improving, many rules become mandatory, new technologies are put in place and new computational tools integrated the old system; but above all the market seems to welcome this " revolution " and requires new skills at all levels of the supply chain. There are some new profiles that is worthy to mention as an example of new professional figures in the construction sector: the energy auditor, technician for the certification of energy quality, construction technician expert in energy efficiency and ZEB (zero emission buildings) designers.

1.3 Sustainable mobility and transport

In order to achieve a sustainable mobility system many different actors have to be involved in the conversion process: those who design and implement the vehicles used to transport people and goods ; those who deal with the mode of transport in and out of the city ; rethinking the organization of functional areas of the city; professionals in citizenship education and those who control that the rules of common life are respected. The professional figures connected with the sustainable mobility and transportation sector are: mobility manager, logistic manager, traffic and transports engineer, expert in environmental education, expert in the economy of transports and port manager.

1.4 The production of energy from renewable sources

The studies and data available on employment impacts, in the areas linked to renewable and energy saving, reveal that the sector of energy efficiency, in relation to the construction

industry is among the green sectors the one that offers most employment opportunities. Below the depth of some professionals belonging to this wide sector: installer of biomass plants for energy uses, installer of heat pomp, geothermal installer, installer of thermoelectric and photovoltaic systems, installer of solar thermal systems, chimney sweeper, energy manager and expert in designing renewable energy systems.

1.5 Sustainable agriculture and agro - energy

The field of agro - energy is one of the most advanced in agriculture development, firstly because all the technologies related to it are new or have been innovated in the last twenty years and secondly because the agro - energy converge the latest theories on land use, energy efficiency and water saving. In addition to the most innovative professional figures belonging to this new sector, it is worthy to remind also to the more traditional ones, due to the multidimensional nature of agriculture. Among them we see the entrepreneur for agro-energy, manager of agro-energetic plants, consultant for the development of agro energetic plants, agronomist, manager of agro-tourism and operator of didactic farm.

1.6 The local management and sustainable tourism

In a perspective of prevention against the increasingly disruptive effects of climate change, that are added to those caused directly and indirectly by human beings, a sustainable land management needs of professionals that are able to understand its changes and its transformation. In this perspective, sustainable tourism becomes a great opportunity to develop multitasking professionals able to hold together communication skills, knowledge of the local territory, to understand its peculiar and distinctive elements and knowledge about the load bearing capacity of the environment and the communities concerned. The professional figures identified in this sector are landscape gardener, expert in territorial management, disaster manager, expert in territorial event organization, and marketing manager.

1.7 Smart City

The new professionals are characterized by high technological skills and management . It is a very broad category, a new generation workers with a keen sensitivity to the economic and social sustainability . Here an insights about some of the professionals in the industry: start-up consultant, expert in geographic information system (GIS), expert in information communication technology (ICT), smart city expert, participation facilitators, expert in web marketing for sharing economy, digital facilitator, fundraiser and App designer.

1.8 Eco – innovations

The Eco-innovation sector involves a mix of professionalism, from scientists to creative, from experts in economic issues and management to communication experts . Their skills describe in detail what knowledge, skills, values and behaviours characterize them . Five professional profiles were selected as priority: chemical (ex.expert in bioplastic), designer, certification (ex. Responsible for quality assessment and expert in green certification), Life Cycle Assesment (Expert in LCA and in evaluation of the product and process sustainability), facilitator and science communicator.

The sole problem concerning the access to this labour market is the difficulty for the enterprise to find candidates that meet the requirements of the job positions, in terms of skills and know how.

The education and training opportunities are still scarce and the traditional education does not provide the practical training that is needed for this kind of professional figures.

This aspect concerning the training opportunities will be deepened in the following paragraph.

2. Existing education and training programmes related to conversion sector

Nowadays many economies are looking forward to contribute to the ecological conversion of productive activities as well as consumption. It is implicit that these are growing importance also for the training processes.

The traditional education system, high schools, professional school and universities is facing a consistent gap in training young people for the new green professions. By now faculties like agronomy, building and energy engineers does not provide specific courses on green solutions. The knowledge on energy efficiency, the technology related for example to passive houses and all the innovation related to the green sector including the technology to produce organic food are left to the research sector or to the practical experience of professionals.

Another limit of the current formal training is the need to innovate the training methods; the training programme still use traditional education methods as face to face lectures and formal evaluation and certification tools.

The acquisition of the skills should take place in the field, such as contamination and cooperative exchange between different disciplines, they should be result oriented and focused on giving the tools to develop business idea. An example is the organic farming: to be able to work in the organic sector the professionals needs to practice in the fields rather than in the classroom, to give a practical demonstration to the farmers that producing organic is possible and furthermore it is more convenient. The current educational paths, as the university career in Agronomy (with rare exceptions) do not provide specific training on organic growing.

In a wider perspective of the training system, it would be interesting to have the contribution of the artisans and enhance their skills for the green sector.

Carpenters, blacksmiths, glassblowers and small producers could play a key role within the share economy making themselves promoters in changing the current productive model.

In our country the promotion of education and training is among the competences of the regions.

Considering the numerous opportunities offered by the conversion sector it is more necessary than ever the implementation of national and regional laws encouraging the investments and promote a public-private collaboration in developing training programmes. Hence, it is necessary to provide funding for the actors involved in conversion training activities, such as schools, universities, accredited entities, public bodies, private enterprises, trade unions, associations and informal bodies. All of them should be enabled to develop interdisciplinary and complementary training programmes aimed at achieving a social and ecological conversion in our Country.

This would be the sole option to promote a genuine transition towards new productive, energetic and consumption models oriented to an environmental and social sustainability.

In terms of training, it is worth mentioning that the companies are facing greater difficulty in finding professionals able to work in the green sector, mainly because of lack of technical and " transversal " skills (ex. Autonomy, flexibility, ability to work in teams , etc .) Competences that can be developed only through wider diffusion in the formal education of training paths envisaging the alternation school to work.

In the last few years, regional authorities have tried to fill the gap of the traditional education by financing the realization of professional training specific for the new jobs related to the green sector.

Many Regions, including Lazio Region, are developing European Union funded (European Structural Funds) educational programmes providing skills and knowledge to have access to green jobs to be implemented by accredited training centres located in the territory. On the other side, the private enterprises are taking advantage from their trained professionals and started offering training not only to its own employees but as a new branch of business.

AlmavivA Green experience represents an excellent example of training innovation in the conversion sector. Almaviva, an industrial group with over 25 thousand employees, was born in 2005 through the merging of two companies COS group and Finisel. In 2008, following the need of optimizing costs and find more resources to continue the activities of the enterprise, the managers decided to promote and implement a plan for reducing consumption, promote new behaviours aimed at environmental sustainability and reinvest the saved resources to pay the provision for the results bonus to the employees. To achieve this process of change, the enterprise started to develop research activities by monitoring the consumption of the company.

To integrate the research activities and the rehabilitation of the company and make it more efficient and sustainable, the enterprise realized the project Almaviva Green. In 2009 it was constituted a Green Team of experts in different disciplines, which defined a road map, designing a structured and detailed plan of the intervention to be done and the schedule to implement them. At the end of the year the transformation of the enterprise in a Green enterprise was achieved.

A key aspect of this evolution has been the vocational training of the employees. The training developed by the research unit was aimed at raising awareness on the perspectives of the economic system, analysing the causes of the productive and environmental crisis, examining options for a conversion of the production to respect the environment and finally involve the unions for a stronger engagement in environmental field.

In this framework the company decided to promote training modules focusing on three directives:

a) Carrying on the training initiatives addressed to Almaviva's employees and extent to the other enterprises part of the Almaviva group the training materials used in the past editions.

b) Repeat the training courses in all the plants situated in other regions, involving other research units and other unions' referents.

c) Design specific training addressed to the employees of Almaviva on issues related to energy savings law (national and European)

It would be interesting to spread the experience of Almaviva to other enterprises at national level, by promoting lobby activities on the Unions in order to give them an active role in the promotion and diffusion of best practices.

3. Education and training needs in the conversion sector

Here accent is over needs of development/re-definition/creation/fostering the profession of conversion expert at regional and national level. In addressing the issue of education and training in the conversion sector in terms of social impacts and effects on the labour market we have to consider an interesting fact that emerges from the report prepared by the ILO "Green Jobs becoming a reality - Progress and outlook in 2013". It affirms that in 2013, almost 20 professional figures out of 100 in the green sector are considered by enterprises difficult to find, compared to the 11 out of 100 of the other sectors. These difficulties have provoked 10,000 hires less in absolute terms, a relevant number considering the current level of unemployment. Therefore the need to make proposals is becoming more urgent in order to offer appropriate training and clear the mismatch between the supply and the demand in the green sector.

According to ISFOL (the Institute for the Development of Vocational Training for Workers) in the last two years the demand for training in the environmental sector has significantly increased; and the 70.7% of the training activities surveyed is about lifelong learning. This demonstrates that the need of upgrading skills and create new competences is more widely perceived by the adult population that seeks to adapt to the new trends of the market.

The vision of a complete economic and social transition towards a paradigm of environmental sustainability expands and scale up the range of possible occupations and new competences

that can be used in the labour market. This should be the goal of the vocational training and for the training actors in order to update the contents and the professional figures result of the courses.

Forming a private company, an entrepreneur, a group of workers, a community or administrators to the ecological conversion, means being aware that a conversion is real only if it is fair from the social and environmental point of view. Therefore only if it considers various and diverse aspects the ecological conversion can represent a real transition to a new paradigm.

The first step will be to recover the existing knowledge and to update them, secondly it will be necessary to form not only entrepreneurs and companies but also to raise awareness and build training processes addressed at all industrial sectors and in particular to the communities and institutions that are involved in the conversion process (ex Almaviva Green).

It would also be important to promote the local production, discouraging the relocation and long distance supply chains, to build synergies with research centres and universities in order to support the conversion process in the long-term, a key aspect will also be the contribution of the trade unions and civil society. The training will have to enhance the skills and potential of each trainee, and be part of a wider project in which not only the employer-employee relationship is involved in the process, but also the relationship with other workers, the surrounding environment and the community that hosts the productive activity.

We consider essential that the training takes a systematic and interdisciplinary approach; while maintaining an high quality level in order to train technicians and operators of specialist areas, it should also give elements and contents able to offer a wider overview.

As an example of innovation we specify that in a legislative instrument that we mentioned in paragraph 2.2, the Regional Law proposal n. 227 it is mentioned the introduction of incentives for lifelong training of workers aimed at rehabilitating the local productive structure both through the innovation of the hardware (innovations related to infrastructure and innovation on

the product), and innovation of the software (cultural, systemic and innovative aspects of the production cycle). In our view a key aspect is that the conversion of the labour market could incorporate these two approaches in an integrated and synergistic way, in order to build a more systematized action able to provide a more complete vision, useful for human and professional development.

In Morin's view, development creates a way of organizing the society that follows a logic in which the hyper specialisation provokes the compartmentalization of the individuals. This also depends on the techno-economic conception of development, ruled by the calculation as unique instrument of investigation and knowledge. This system lead to disregard many important aspects: first of all it leaves apart any activity that cannot be monetized, the mutual help, the use of common goods, and more important it does not consider what cannot be measured as for example joy, suffering, dignity, ecological degradation.

Inspired by this approach, we should try to humanize a model that clearly shows its contradictions and inconsistencies, highlighting on the other side a trend, the one of the green economy and green jobs that can offer opportunities of fair growth and development for the country.

For example in the construction processes of the smart cities, a required profile may be the "collective impact officer" with the role of looking for partners and mediate between stakeholders in the preparation and implementation process of infrastructure projects or the "facilitator of green projects in multi-stakeholder partnership". These "hybrid" professional figures will have to be able to integrate their specialized skills and know how to range from the sociological scope for the promotion of participation, the identification of key actors, using methods of territorial survey, the ability of stimulating aggregation processes; to a more technical field, as the sustainable mobility, or the Green Public Procurement. Another key figure may be the expert in the design of conversion interventions: a professional with expertise on ecological conversion in the institutional, business and social field, a figure able to

adopt a systemic vision useful to design local development interventions, with an integrated and interdisciplinary approach, focusing on environmental and social sustainability.

B. Occupational opportunities and training needs in Croatia

1. Existing professional profiles related to conversion sector

Graduates from the Faculty of Architecture are professional profiles likely to be shaped into future specialist "sustainable conversion expert". So far it is not clear what kind of knowledge and expertise is needed for a complete sustainable conversion consultancy. Existing schemes like LEED, BREEAM or DGNB could be used as guidelines or even standards.

GREEN Building Council programme Croatia[1] has listed 15 consultants offering consultation and building certification according to US LEED[2], UK BREEAM[3], or German DGNB[4] certification systems.

2. Existing education and training programmes related to conversion sector

The programme that is most similar to the needs of sustainable conversion is **Green building professional programme.** It is an annual education programme covering various topics in 12 modules and led by GREEN Building Council Croatia.

The modules are:

1. Green building definition, principles of architecture design, planning and construction of green buildings, green building envelope
2. International certificates for green building (LEED, BREEAM, DGNB)

[1] http://www.gbccroatia.org/stranice/konzultanti-za-me-unarodne-certifikate/67.html
[2] http://www.usgbc.org/leed
[3] http://www.breeam.com
[4] http://www.dgnb.de/en

3. Green building management and “Cradle to Cradle”,
4. Reconstruction of cultural heritage buildings according to green building principles
5. Design of a nZEB houses[5]; Legal framework for nZEB; Green office Croatia
6. BIM, Facility Management
7. Spatial planning and urbanism as a precondition for a green building, choice and management of a sustainable site
8. Sustainable materials and resources, sustainable wooden constructions in green buildings
9. Intelligent buildings and lighting design
10. Efficient management of water resources
11. Financial aspects of a green buildings, funds and incentives (national and international)
12. Sustainability and landscape architecture

In addition to above mentioned programme a collegium Sustainable architecture is taught on the Faculty of Architecture, Zagreb covering in general energy efficiency, environment protection, technologies of materials and systems.

3. Education and training needs in the conversion sector

There is a need for an integrated training programme, or at least for an additional module to existing programmes covering social aspects of the conversion. Spatial planners and urbanists are closest to the occupation of conversion site specialist, but there is no formal or informal education except a few courses on the Faculty of Architecture. They gain experience mainly through work in certified bureaus.

[5] According to EPBD directive

C. Occupational opportunities and training needs in Germany

Under this section we investigate the occupational perspectives in the conversion sector. We try to answer the question if there are special conversion sector specialists, professions, education in this sphere.

1. Existing professional profiles related to conversion sector (ex. profession of conversion expert)

There are some professional profiles in Germany related to this sector. Following the five most important to our opinion:

First: Urban resp. Town Planner (Stadtplaner)

Urban planners are involved in making long and short-term decisions about the management and development of cities, towns, villages and the countryside.

They aim to balance the conflicting demands of:

- Housing;
- industrial development;
- agriculture;
- recreation;
- transport;
- and the environment, in order to allow appropriate development to take place.

Planners should be at the heart of regeneration within towns and cities, taking into account the often competing views of businesses and local communities. In rural areas, they must ensure

that development is sustainable and that the right balance of development is achieved to preserve the countryside.

And most important: The work of planners also makes a positive contribution towards tackling the effects of climate change.

Second: Spatial Planner (Raumplaner)

Spatial planning systems refer to the methods and approaches used by the public and private sector to influence the distribution of people and activities in spaces of various scales. Spatial planning can be defined as the coordination of practices and policies affecting spatial organization. Spatial planning is synonymous with the practices of urban planning in the United States but at larger scales and the term is often used in reference to planning efforts in European countries. Discrete professional disciplines which involve spatial planning include land use, urban, regional, transport and environmental planning.[1] Other related areas are also important, including economic and community planning. Spatial planning takes place on local, regional, national and international levels and often results in the creation of a spatial plan.[6]

Third: Landscape Architect (Landschaftsarchitekt)

Landscape architects create the landscape around us. They plan, design and manage open spaces including both natural and built environments.

They work to provide innovative and aesthetically pleasing environments for people to enjoy, while ensuring that changes to the natural environment are appropriate, sensitive and sustainable.

[6] Internetsite: Wikipedia.org, 07th January 2016 https://en.wikipedia.org/wiki/Spatial_planning

The work covers diverse projects – both urban and rural – that range from designing the layout of parks, gardens and housing estates to city-centre design, sporting sites and improving land affected by mining or motorway construction.

A landscape architect collaborates closely with landscape contractors, as well as other professionals, especially architects, town planners, environmentalists and people working in surveying and engineering functions.

The five main areas of practice within landscape architecture are:

- landscape design;
- landscape management;
- landscape planning;
- landscape science;
- urban design.

Fourth: Architect (Architekt)

Architects work in the construction industry and are involved with designing new buildings, extensions or alterations to existing buildings, or advising on the restoration and conservation of old properties.

They can work on individual buildings or on large redevelopment schemes, and can be responsible for the design of the surrounding landscape and spaces.

Architects work closely with their clients and users to make sure that projected designs match their needs and are functional, safe and economical. They usually control a project from start to finish and work with a number of construction professionals, including surveyors and engineers, producing drawings and specifications that the construction team works to.

The role of an architect is very varied and can range from freelance and small-scale project work to employment with multinational organizations working on iconic landmarks.

Fifth: Geographer (Geograph)

A geographer in general is a scholar whose area of study is geography, the study of Earth's natural environment and human society.

Although geographers are historically known as people who make maps, map making is actually the field of study of cartography, a subset of geography. Geographers do not study only the details of the natural environment or human society, but they also study the reciprocal relationship between these two. For example, they study how the natural environment contributes to the human society and how the human society affects the natural environment.

In particular, physical geographers study the natural environment while human geographers study human society. Modern geographers are the primary practitioners of the GIS (geographic information system), who are often employed by local, state, and federal government agencies as well as in the private sector by environmental and engineering firms.[7]

Hence, important to our field is the Human geography which includes topics like urban geography, cultural geography, economic geography, political geography, historical geography, marketing geography, health geography, and social geography.

Many other professions overlap with the conversion sector due to their interdisciplinarity. To mention them all might not be possible on the small scale of this report.

2. Existing education and training programmes related to conversion sector

[7] Internetsite: Wikipedia.org, 07th January 2016 https://en.wikipedia.org/wiki/Geographer

For all the professional profiles mentioned in point 5.1 education and training programmes exist in the German-speaking area (incl. Austria and Switzerland). Many Universities or Universities of Applied Sciences (Fachhochschulen) are offering various courses of studies.

Examples (for summer semester 2016):

Urban resp. Town Planning:	53 master degree courses
Spatial Planning:	33 master degree courses
Landscape Architecture:	23 master degree courses
Architecture:	155 master degree courses
Geography:	103 master degree courses

So in the five detected main professional profiles related to the conversion sector we will find more than 350 possibilities to gain a master degree within the German-speaking area this year.

2. Education and training needs in the conversion sector

Corresponding to the huge amount of opportunities mentioned in point 5.2 it is difficult to figure out what will be necessary in particular.

First there is already a broad agreement within the German society on the subject "sustainability".

But the conversion sector must also be seen socially. The economic liberalism is a mechanism which often rules private planning and conversion within our cities. The motto is maximal gain. Hence it is our opinion that in the profession of conversion – beside the aspect of sustainability – must an emphasis on social affairs.

Many universities, their teachers and students work already with respect to this. Even business companies sometimes have got a social claim (beside the sustainability). But anyway:

To determine the needs in the conversion sector the further strengthening of social and sustainable aspects must be our principal object.

D. Occupational opportunities and training needs in Romania

1. Existing professional profiles related to conversion sector

In Romania conversion of used spaces, buildings, etc. fall under the responsibilities of architects and other profiles related to them, such as Building architect; Head architect; Urbanism, landscape and spatial planning architect; Restoration architect; Architect advisor; Expert architect; special inspector architect; specialized referent architect Territorial analyst; Environmental analyst; Cadaster employee at local authorities; Regional Development agents, etc. Official documents regarding spatial and urban planning have all taken in consideration a more environmental friendly way of designing many buildings, streets, parks, etc. of the public sector.

Every major urban city has in effect local urban planning regulations. These are a series of documents, that cover specific regulations for urban and many rural localities alike. The documents lay down many rules for land usage and building land limits, including a well outlined development strategy and other regulations in correlation with the approved spatial planning documents, approved by the local council. There are six types of urban plans: General urban regulation plan; General urban plan; Zonal urban plan; Zonal urban plan for core area; urban plan for protected built area and detailed urban plan. Planners in local councils have to respect the legal frameworks (see chapter 2) that govern town and spatial planning when making important decisions. The decisions have to respect the heritage, environment and specific laws/policies.

2. Existing education and training programmes related to conversion sector

Babeș-Bolyai University Cluj-Napoca, Faculty of Geography has a few educational offers that relate and are structured in way that they integrate conscious, environment friendly spatial planning. The core of the specialisations varies, but each of them shares the main legal framework on which spatial planning and sustainable development are based on. Many of the programs incorporate fieldwork as a requirement. Cartography and Territorial planning specialisations for instance have multiple field trips in which students are introduced to the equipment, techniques and examples of good practices with which they can operate later on in their professional line of work.

Examples of education programs related to conversion sector at the faculty of geography in Cluj-Napoca are Territorial Planning and Cartography which have the following courses that are related to sustainable development: Environmental geography; Rural and Urban Planning; Geographic area organization; Social Investigation Techniques; Management of development projects; Landscape architectural services; Institutions and legislations in urbanism and land management; Regional Planning and Local Development; Geographical risk phenomena and processes; Global Challenges of Sustainable Development; Geoeconomy; GIS Spatial Planning Applications; Evaluation and protection of the environment; Mapping industrial and agricultural systems.

Another example is Ion Mincu University for Architecture and Urbanism, located in Bucharest, Romania. It has only 4 faculties, but it is the best university in Romania on architecture:

- Faculty of Architecture
- Faculty of Interior Architecture
- Faculty of Urbanism and Landscape
- Department of Advanced Studies

3. Education and training needs in the conversion sector

As mentioned before, the only educational programmes in the conversion sector – such as urban development, urbanism or architecture are provided by national universities. Every major city of Romania has at least two faculties dedicated to urban development and planning. The problem is the lack of practical workshops and trainings.

Another need in this sector is linked to private programmes which will involve theoretical and practical information and exercises for those aiming to work in sustainable conversion. There are no private initiatives to help students to get a professional degree specialized in the conversion sector, but there are international programmes where Romanian students can apply for a fellowships or training courses in sustainable conversion of public spaces.

E. Occupational opportunities and training needs in Bulgaria

1. Existing professional profiles related to conversion sector

Due to the fact that there isn't an integrated conversion sector in Bulgaria, there is no professional profile of the conversion expert. However, there are other occupational opportunities, which are related with the development of this sector, even though at this moment they are considered more as part of other branches such as ecology, social entrepreneurship, sustainable development, regional development, infrastructure, architecture, urban development, arts, etc.

Therefore the majority of professional profiles, related to the conversion sector are mainly previously developed, in order to cover other trends. The first profile is the one of an architect:

The Law on Chambers of Architects and Engineers in Investment Design (LCAEID) defines:

- The structure, organization and activities of professional Organizations of Architects and Engineers in Investment design, for the exercise of the profession
- The methodology for determining the amount of remuneration for providing design services in the planning and Investment Design
- The liability for breach of professional duties and professional ethics
- The terms and conditions for the acquisition of special design capacity.

In Bulgaria regulations for entry and subsequent implementation of activities market services in the field of investment design are some of the strict EU-wide.

LCAEID said that the acquisition of full design capacity persons with a degree "Master" is required two years of service as an employee under an employment contract with Designer fully qualified or four years as designers freelance or employed under official contract or employment relationship (Art. 7 of LCAEID 6). LCAEID, Art. 7 (5) designers with limited design capacity can acquire full qualification if they have experience of: 1. (amend. SG. 28 of 2009) two years as employees on the payroll with full designer design capacity, or 2. four years as designers Free practice or employed as civil servants or labor relationship with basic employment contract to a post that requires relevant education

In addition, the legislature expressly states that persons degree bachelor who have not less than four years experience, may acquire limited design capacity and provide design services in the field of planning and investment projects for the development of projects relevant parts of the project documentation after their entry into Register designers with limited design capacity in the Chamber.

Designers with limited design capacity have strict quantitative restrictions on the scope and specifics of the provided design services in the field of planning, investment planning and development of projects relevant parts of the project documentation (Art. 7, para. (3) LCAEID).

Membership in the Chamber of Architects is required for full Architects design capacity (Art. 9 ZKAIIP7).

The next type of occupation, related with the conversion sector is the one of the urbanist. This trend is relatively new, as the first university urbanism program was established in 2002. Since then the occupation has been growing its popularity. The realization in the labor market is related with many different activities.

Diversity in the current and the last place of work, adaptability in terms of employment, the large number of professional areas in which planners have contributed, shows convincingly that graduates "Urbanism" successfully integrated into the national labor market. The

assessment of real opportunities for professional development of planners in the country at this time is positive.

Another focus on the need is to strengthen the profession and building a positive image among the general public. Another is the realization of the existence of public funding for research and analysis, regional and spatial planning.

In terms of sustainable development, the diversity of professional profiles in bigger. The reason is that this topic is attractive for the public institutions, as well as the NGOs and the private organizations. It needs ecologists, as well as experts in the fields of energy production, engineers and even artists. In both of the cases the gaining of specific skills can be done both at university level, or by different VET programs.

Generally the sustainable development is divided into three subsections- ecological-preserving of the environment for future generations, social- preserving a high standard of living for the population, economical- development of products and services, which are connected with the idea of preserving the goods for future generations.

Each of these subsections requires different knowledge and skills, and therefore- different occupational profiles. From researchers to politicians and entrepreneurs, a wide variety of occupations can be related to this field of the public life.

2. Existing education and training programmes related to conversion sector

At this moment in Bulgaria there are 50 authorized higher education institutions (HEIs) . Six of these HEIs offer architecture programs, only one offers Urbanism as Bachelor program.

The University of architecture, civil engineering and geodesy offers a variety of subject, related to the conversion sector as follows:

Architecture Master (MA)- Students, pursuing the degree programme in Architecture study about 100 disciplines with a total number of about5000 academic hours. During the first eight semesters the study process is carried out under a uniform academic curriculum.

Urban Planning Bachelor (BA)- Students in the Bachelor's degree programme in Urbanism study about 50 disciplines with a total number of about 3000 hours during eight semesters.

Transportation Engineering Master (MA)- Training in Transportation Engineering was introduced in 1943/44, one year after the establishment of the first Higher Technical School in Bulgaria.

The complete study programme takes 10 semesters.

Water Supply and Sewerage Master (MA) (programmes of the Faculty of Hydrotechnics) are accredited by the European Association of Engineers (FEANI) and graduates can obtain the degree "Euro-engineer". The length of study in Water Supply and Sewerage is 10 semesters, the last one being used for development and presentation of a diploma project.

Land and Real Estate Management and Planning Bachelor (BA)- In 2007–2008 academic year the Faculty of Geodesy launched a new degree programme.

Other HEI institutions, which have specialized in this subject is University of Structural Engineering & Architecture (VSU) "Lyuben Karavelov" – Sofia, offering programs such as civil engineering, architecture and Buildings renovation and design.

The University of Forestry offers programs, such as ecology and landscape architecture, which are generally focused on the topic of sustainable development and green urban planning.

On the other hand, there are professional training centres, which offer different education programs, related to the conversion sector, apart from the university programs. Among them are "ecology and preserving the environment".

3 Education and training needs in the conversion sector

Ones the conversion sector becomes an integrated part in the public sphere, it will develop its own needs and required skills, which will lead to its specific occupational skills.

On this stage is rather early to make such conclusions, but the needed requirements will be to offer a complex set of skills, which will cover the skills, gained in different and non homogeneous programs.

It has to obtain organizational and planning skills, as well as at least basic knowledge in the field of ecology, urbanism, economy and social service.

Another important issue, which needs resolving is the type of programs which are going to be offered. Will it be settled as a part of Master studies, Bachelor programs of different VET courses. All of this decisions will determine the future development of the conversion sector.

III. Conclusions and final remarks

From the information gathered through the survey and by desk research we can make some conclusions. It is visible that there are a lot of disparities among the five countries covered in this report's countries. In the cases of Romania and Bulgaria sustainable conversion is a rather new sector and connected mainly to ecology, urbanism and sustainable development, while it is still not yet connected with economical and social aspects.

In terms of the existing trends and gaps in the conversion sector it is visible that in the majority of cases there is no concrete framework regulating the sector. The reports have shown that the aspects of sustainable conversion are often objects of national strategies and plans which are not binding documents.

Still there is a growing interest in energy efficiency and sustainability in terms of urban planning and ecological issues. Moreover, it appears that most of the funding available for conversion initiatives comes from the public sector.

As for the educational trends, the report shows that there are different programs that offers pertinent formal education trainings, like for example those offered by HEIs, related to architecture, ecology and environmental studies. But generally speaking there is a lack of specific training regarding sustainable conversion project development and management.

It appears clearly from the studies realized that there is an important gap between the need of implementation of sustainable conversion initiatives and the funding available as well as between the need in terms of new competences and the educational program available.

Bibliography

1. Chamber Act no. 2093 - B connected to the law of stability for 2014 , called “Collegato Ambiente”, that contains measures for the protection of nature and sustainable development, environmental assessments, energy , green purchasing , waste management and remediation , soil conservation and water resources. http://www.camera.it/leg17/522?tema=collegato_ambientale
2. Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
3. Life+ ETA BETA (LIFE09 ENV/IT/000105) , "Environmental Technologies Adopted by small Businesses operating in Entrepreneurial Territorial",
4. See Ref. Par. 3.1 Public-Private-Partnership in conversion sector
5. The “Control Agent” will be the so called *Cabina di Regia* instituted with the Regional Directive 4/2013 , "*Cabina di Regia* for planning and implementation of regional policies for development and economic, social and territorial cohesion financed by the ESF Funds and other financial resources ordinary and / or additional "
6. “*Corviale Domani: dossier ricerca per un distretto culturale*” Istituto Italiano per l’Industria Culturale – ISICULT per Filas.
7. http://www.shagree.it/
8. Editoriale41 S.r.l., Aerosigma S.r.l., Eulogic S.r.l., Ser.Co.M. S.r.l
9. http://www.europinione.it/riqualificare-gli-spazi-pubblici-la-scommessa-per-unitalia-piu-vivibile/
10. Ciupagea, C., Manoleli, D., Nita, V., Papatulica, M., Stanculescu, M., 2006, *Strategic direction for sustainable development in Romania*, European Institute of ROMANIA, Bucharest.
11. Gavrila-Paven, I., 2014, *Sustainable Development*, PODCA, Alba Iulia, available at: http://www.podca22763.ro/
12. Government of Romania, 2005, *2007-2013 National Development Plan*, Bucharest.
13. Government of Romania, Ministry of Environment and Sustainable Development, UN National Development Centre for Sustainable Development, 2008, *National Strategy for Sustainable Development of Romania Horizons 2013-2020-2030*, Bucharest.
14. Ministry of Regional Development and Public Administration, 2014, *Territorial Development Strategy of Romania - Polycentric Romania 2035; Territorial cohesion and competitiveness, development and equal opportunities for people*, Bucharest.
15. Moldovan, L., Z., 2009, *Resource Management and Sustainable Development*, Professional association of specialists in public administration, Bucharest.

16. Oprea, R., 2009, *Organization and regulation strategy in the context of conservation and sustainable development of the environment*, Course notes available at: http://www.romanian-ports.ro/
17. The World Bank Publications, 2006, *Social Analysis in the Urban Sector: A Guidance Note*, France.
18. Zamfira, R., 2012, *Functional Conversion of industrial spaces in the context of Integrated Urban Regeneration*, available at: https://www.academia.edu/
19. http://www.finantare.ro/fabricat-in-tara-lui-andrei.html
20. http://www.academia.edu/4202261/CONVERSIA_FUNC%C5%A2IONAL%C4%82_A_SPA%C5%A2IILOR_INDUSTRIALE_%C3%8EN_CONTEXTUL_REGENER%C4%82RII_URBANE_INTEGRATE
21. http://discutii.mfinante.ro/static/10/Mfp/ajutordestat/HG1680_armonizata19102012.pdf
22. http://fondong.fdsc.ro/general-information-ngo-fund
23. Environmental Protection and Energy Efficiency Fund, http://www.fzoeu.hr
24. Agency for legal transactions and real estate brokerage, http://www.apn.hr
25. Center for Monitoring Business Activities in the Energy Sector and Investments, http://cei.hr
26. National bureau for spatial planning, http://www.hzpr.hr
27. National bureau for the management of state owned real estate, https://imovina.gov.hr
28. Ministry of Construction and Physical Planning, http://www.mgipu.hr
29. Ministry of Environmental and Nature Protection, http://mzoip.hr
30. European funds, http://europski-fondovi.eu/fondovi
31. Strategic documents of the Republic of Croatia, http://europski-fondovi.eu/strateski-dokumenti-republike-hrvatske-2014-2020
32. Project Build Upon http://buildupon.eu/
33. LEED, http://www.usgbc.org/leed
34. DGNB, http://www.dgnb.de/en/
35. BREEAM, http://www.breeam.com
36. GREEN Building Council, Zagreb, Croatia http://www.gbccroatia.org
37. Energy Institute Hrvoje Požar, Zagreb, Croatia, http://www.eihp.hr
38. The City Acupuncture, http://www.cityacupuncture.org
39. Project Zagreb for Me, http://zagrebzamene.d-a-z.hr
40. Campus Borongaj, http://borongaj.unizg.hr,
41. International Sustainable Campus Network, http://www.international-sustainable-campus-network.org
42. Project Campus Living Lab – Faculty of Arhitecture, Zagreb, Croatia, http://www.arhitekt.unizg.hr
43. Community centre Rojc, http://rojcnet.pula.org, http://captureprojects.org/captureprojects/oos.html
44. Zelena akcija (Green Action), http://zelena-akcija.hr

45. Eco center Zlatna greda, http://zlatna-greda.org
46. Project POCACITO, http://pocacito.eu/
47. National acts and regulations in the sector of construction, spatial planning, construction inspection, communal affairs, residential sector and energy efficiency (in Croatian language): http://www.mgipu.hr/default.aspx?id=3654
48. National acts and regulations in the sector of environment and climate protection (in Croatian language): http://www.mzoip.hr/hr/okolis/propisi-i-medunarodni-ugovorixxxxx.html
49. "To whom belong ex-military bases in Croatia – experiences of conversion in Croatia", Zagreb, 2014. Autors: Kruno Kardov, Lidija Knežević, Nives Rogoznica
50. (2005). *Strategy for development of Varna municipality 2005-2015.* Varna : Varna Municipality .
51. (2009). *National Environmental Strategy 2009-2018.* Sofia: Ministry of water and environment of Bulgaria.
52. (2011). *NATIONAL ACTION PLAN TO PROMOTE THE PRODUCTION And accelerated ENTRY OF ENVIRONMENTAL vehicles including electric mobility IN BULGARIA FOR THE PERIOD 2012-2014,.* Sofia: Ministry of water and environment of Bulgaria .
53. (2012). *National strategy for regional development of Republic of Bulgaria 2012-2020.* Sofia: Ministry of regional development and public works .
54. (2014). *National action plan for sustainable management of the lands and soving the demographical problem in Bulgaria (2014-2020).* Sofia: Ministry of regional development and public works .
55. (2015). *MUNICIPAL MANAGEMENT PROGRAMME waste in the municipality of Dobrich 2015-2020.* Dobrich : Dobrich municipality.
56. *Bulgaria, Ministry of water and environment in Bulgaria*. (н.д.). Свалено от http://www.moew.government.bg/?lang=en
57. *Dnevnik online magazine*. (н.д.). Свалено от http://www.dnevnik.bg
58. *http://www.lex.bg/*. (н.д.). Свалено от Bulgarian legislation guide.
59. *Ministry of regional development and public works* . (н.д.). Свалено от http://www.mrrb.government.bg/en/
60. *Portal for public consultation*. (н.д.). Свалено от http://www.strategy.bg/
61. *Urban art foundation* . (н.д.). Свалено от http://uaf.bg/

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