FosterREG Discussion Paper

Recommendations on fostering public authorities' capacities for planning, financing and managing energy efficiency within integrated urban regeneration strategies based on the FosterREG collaborative analyses in three EU countries.

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Introduction and main recommendations

FosterREG is a European Horizon 2020 project aimed at fostering public authorities' capacities to plan, finance and manage integrated urban regeneration for sustainable energy uptake. In the collaborative analysis phase the FosterREG partners of the three national clusters (Croatia, Spain and the Netherlands) have analyzed the barriers and developed, in collaboration with national, regional and local stakeholders, solutions and strategies for overcoming them. During an European-wide workshop held in Brussels these findings were further discussed with workshop participants from the three national cluster collaborative analyses, representatives from the European Commission (DG ENER, DG REGIO) and EU networks. In the *FosterREG Collaborative Analysis and Best Practices Report* (Del 3.5) the findings are described in detail. Here the overall recommendations are given:

1. **To improve awareness of energy efficiency in urban regeneration and to improve capacities.** It is recommended to apply a more benefits-based approach of energy efficiency solutions, focusing on value creation aspects such as interior comfort, urban quality, safety etc. And, to establish a set of standardized tools for improving energy efficiency in urban regeneration for public officers, focusing on financial instruments, local administration management and coordination procedures and green public procurement.

2. **To enhance funding and financing of energy efficiency in urban regeneration projects.** It is recommended to provide more favorable conditions for investments in energy efficiency renovation and to incentivize joint and integrated projects through better financing schemes. Solutions, for instance, are the use of guarantee funds (instead of loans or subsidies) to spread investment risks public-private and financing schemes supporting the design and planning phase of sustainable refurbishment projects with ambitious targets beyond energy efficiency.

3. **To foster the development and fine-tuning of energy efficiency in urban regeneration related legislation.** It is recommended to involve local and regional governments (representation) in the national (and European) legislation developments. Regarding the Energy Efficiency Directive Art. 4 it is recommended to coordinate the National Member State Building Renovation Strategies vis-à-vis with regional and local governments´ strategies, for instance through making it compulsory for the local level to be engaged in national planning (i.e. National Energy Efficiency Action Plans – NEEAPs). Furthermore, the developments dealing with the European Urban Agenda are therefore promising and should also be followed up in each of the EU Member States with national Urban Agendas.

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4. **To improve the horizontal integration of energy efficiency in urban regeneration and vertical coordination among different policy levels.** For the (horizontal) integrative work it is recommended to enhance and facilitate management and interdisciplinary brokering activities, by offering resources for management at local level, because it is there, where the implementation is taking place. To enhance (vertical) coordination between government it is recommended for municipalities to organize coordination meetings in order to consolidate the work of several cities together and create power towards national level and for the European Commission to request municipalities to have integrated strategies (including management and coordination tools) in place when accessing European funds (such as ERDF).

These main recommendations have specific components per each Member State but directly relate and feed into European policy initiatives:

European Urban Agenda and the Urban Development Network

First of all, the main philosophy of the FosterREG project is aimed at fostering integrated approach to sustainable urban development. In particular, FosterREG aims at integration of sustainable energy measures in urban regeneration processes. This relates to the work that is currently being done for developing an European Urban Agenda and the Urban Development Network. The output of the FosterREG collaborative analyses and EU discussions could feed into these initiatives.

Implementation of the Energy Efficiency Directive

Second, the European applicable law regarding energy efficiency at urban scale is the Energy Efficiency Directive 2012/27/EU (EED) which sets binding measures for Member States for the use of energy efficiently at all stages of the energy chain[1]. In the FosterREG collaborative analyses solutions and strategies have been developed for integrating energy efficiency in urban regeneration (main issue 1, 2 and 4). They can contribute to accelerate adoption of "National Strategies for Energy Efficiency in Buildings" (EED Article 4) and the implementation of "Energy efficiency obligations and alternatives" (EED Article 7). The FosterREG collaborative analyses also elaborated on the financial aspects of energy efficiency uptake, such as "Energy Efficiency National Funds". These aspects relate to the goals envisaged in Article 20 supporting the implementation of the national energy efficiency obligation schemes (main issue 2 and 3).

Reading Guide

In the following sections we elaborate further on the main issues and related barriers. We will present per main issue the proposed solutions, strategies and recommendations for addressing them. The strategies can serve as guidance for coordinated policy making and implementation at all relevant levels of scale, from EU to local governments. We pose key questions associated with the implementation of these strategies and provide recommendations as a result of the EU workshop in Brussels.

[1] Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC Text with EEA relevance

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Main Issue 1: Increasing awareness and improving capacities

Main issue and barriers:

This issue is composed of three challenges that are connected to each other. First the lack of awareness among the general public to take energy efficiency measures. This mainly has to do with the lack of awareness or sense of urgency among citizens (e.g. private home owners) to take energy efficiency measures and the lack of knowledge on the benefits that these measures can have. Especially the Southern FosterREG countries (milder parts of Croatia and Spain) lack an immediate sense of urgency because energy efficiency measures are less beneficial than in Northern countries (Netherlands), due to the milder climatological conditions. As a consequence, energy efficiency does not have the same degree of priority in all three countries. Other renovation issues, such as improving the accessibility of building, may come first. Second, the continued awareness of and commitment to energy efficiency measures at the decision makers and politician seems to be lacking. Integrating energy efficiency in long running urban renovation projects need to be continuously sponsored and stimulated by decision makers, as basis for (more) longitudinal public and private investments. Third, the lack of experience and expertise in energy efficiency measures and the benefits thereof. This lack of expertise can result in the general public for an insufficient insight in the benefits and approaches that could be taken. At the contractor and public official side the lack of expertise and experience in taking on integrated projects leads to insufficiently trained staff.

Solutions

Within the clusters various solutions have been identified at the three specific barriers. Communication is positioned as the main instrument to overcome these barriers.

Ia. Awareness of the general public

A solution that was raised in the various collaborative analyses is the possibility to connect energy efficiency measures to other opportunities that are at stake for home owners, such as the improvement of district heating systems which can entice energy efficiency measures. A solution that was raised in the various collaborative analyses is the possibility to connect energy efficiency measures to other opportunities that are at stake for home owners, such as the improvement of district heating systems which can entice energy efficiency measures.

Additionally, the need for increasing awareness at the general public, i.e. residents, home owners, could also be covered by the AIDA-approach developed in the NL cluster. In this solution home-owners are approached according to the AIDA principles: Awareness, Interest, Desire, Action. And hereby taking the home owners along from informing to enticing to action. x

Ib. Continued awareness of and commitment to decision makers

It was proposed to use the lines of communication with the professionals to better inform financial institutions and decision makers. This refers to communicating the goals and actions of stakeholders (at different levels). For example in the Netherlands the City Energy Dialogues (both with citizens and with private stakeholders) and the National Energy Dialogue could prove to be useful instruments.

Ic. Education and Training of contractors and engineers

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In order to facilitate the transition to new ways of thinking and designing of energy efficiency in urban regeneration projects, capacity building and training for employees in the public administration is found invaluable in the Croatian and Spanish clusters.

Strategies

Creating awareness is often staged through emphasizing the sense of urgency for taking action. Stressing the sense of urgency at actor types (public at all levels, private and civic actors) for taking energy efficiency measures can be executed by launching the following strategies.

A first, perhaps obvious, strategy is to initiate urban development projects in which the integration of energy efficiency in urban regeneration is stimulated (carrot) or enforced (stick). It must be attractive (enough) for public, private and civic actors to invest in integrated projects either because of the return-on-investments, added value creation or the avoidance of 'penalties' (fines, additional taxes).

Another strategy is offering attractive new services with regard to the (perceived) necessity or desire to improve buildings and/or city districts, through integration with energy efficiency measures. Establishing Renovation Energy Service Companies (RESCo) that offer combined renovation and energy efficiency packages could relief private homeowners, real estate investors and/or property owning entrepreneurs of too much hassle in managing, financing and implementing renovations.

The last strategy is related to taking advantage of local and regional opportunities. An example of this strategy is the arisen opportunity in the Netherlands using the replacement of the local (gas) infrastructure network as a window of opportunity for putting energy efficiency on the agenda of local public authorities, private investors as well as citizens and entrepreneurs.

Recommendations from the European workshop:

Based on the conclusions of the country studies the participants confirmed that there is indeed a strong need for increased awareness of energy efficiency. The discussion showed that the focus is on the short term, both at the public and the policy makers, with on aspects such as the return-on-investment too high on the agenda. However, it was mentioned that awareness is growing in various parts of Europe, which could be further enhanced with the rising energy prices. To tackle these issues the following recommendations were made for improving the awareness of the general public to enhance capacities of public officers.

First, it was recommended not to focus only on the cost aspects of energy efficiency measures (such as return-on-investment) but also on the added value of these investments for the value of the building and/or district. This added value could be the revitalization of districts, improved comfort of the dwellings and higher quality of the urban living environment. For the quantification of this added value the district scale seems suitable. With this in mind it is much easier to attract co-investments in urban regeneration projects. These co-financing opportunities should be used as drivers for energy efficiency in urban regeneration projects. Second, when developing policy instruments related to improving awareness, these focus mainly on changing peoples´ mindset through stimulation measures (the 'carrot') rather than enforcing further legislation to the general public (the 'stick'). It should however always be balanced and this balance can differ from member state to member state. Third, regarding public officers' capacities to increase awareness in their professional and civic contexts it was

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recommended to establish a set of standardized tools for improving energy efficiency in urban regeneration especially for public officers. These standardized tools should focus on financial instruments, local administration management and coordination procedures, green public procurement and use a common vocabulary.

Main Issue 2: Enhancing funding schemes and financial instruments

Main issue and barriers:

In each of the national cluster collaborative analyses a mismatch between funding supply and demand was identified. This issue is divided in two main components, first the need for the improved management, distribution and segmentation of public funding and second the need for (favorable) preconditions for (more) private investments. The underlying barriers of this main issue are:

- Due to long-lasting financial crisis, public funds at the municipal, regional and national level are low (Croatia and Spain);
- Complexity, lack of coordination and lack of fund segmentation (Croatia and Spain);
- Lack of involvement of the private sector (Croatia and Spain);
- Investments and payback time for renovation remain substantial (Croatia, Spain and Netherlands);
- There is too much focus within the sector and towards costumers on payback time in contrast to other benefits, such as living comfort (Croatia, Netherlands).

Solutions

To tackle the main issues a number of solutions were proposed in the different national clusters.

One of the solution proposed was the creation of revolving funds for implementing energy efficiency measures. The (private) return-on-investments on the public subsidies (partially) flow back into a revolving fund that is used to initiate new integrated energy efficiency and urban regeneration projects. In the Netherlands the SVn-program is a good example of such public-private funding proposition.

To increase the financial means for local public authorities to provide subsidies for integrated projects, there is a perceived need for decentralizing (financial) resources to the local level. This could be achieved by decentralizing (part of) the national energy taxes to the local level. In this way resources could be shared and combined more easily among actors involved at the local level on which integrated projects are to be implemented. This might also enable the creation of more effective public-private partnerships for project financing by including various end users, such as private homeowners and real estate investors.

Furthermore, to stimulate integrated projects, public funding may be directed into funding and subsidizing those projects in which integration of energy efficiency measures in urban regeneration is prioritized and enhanced. This kind of projects could involve public-private partnerships. An interesting example of this is found in the city of Zaragoza, Spain, where in order to boost private buildings' rehabilitation, a new formula is being tested where part of public funds for retrofitting are not awarded directly to building owners to subsidize works, but instead they are used as a loan guarantee for cases of non-payment (default) by the private owners to the community.

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Finally, to attract more private actors and stable investments, long term conditions must be created. This can be achieved by increased reliability of public policy with regard to energy efficiency and urban regeneration policies. And by targeted information about these policies.

Strategies

In the collaborative analyses ideas have been developed that potentially could be developed into strategies to overcome this issue. One of the ideas is to develop a framework of obligations and tax benefits. This framework could be developed by presenting actions in the short, medium and long term. A second idea is the development of long-term strategies, which are cross-cutting at district scale and should be custom-designed based on the city's general strategies. These ideas need further elaboration in order to become coherent and effective.

Recommendations from the European workshop:

From the conclusions of the country studies on this issue the following endorsements or remarks were made. The availability and application of public funds is dependent on the level of development in the region (Croatia). This regional patchwork should be taken into account when developing new schemes. For the effective resolution of the financial issues related to improving energy efficiency measures in urban regeneration projects the following concrete recommendations were posed.

First, regarding the considerable payback time of renovation investments it was recommended not to express all in terms of payback time, hence to apply a net benefits-based approach, because in most cases the benefits of refurbishments last much longer than the costs. This recommendation resonates with the statements made under the raising awareness issue earlier. Second, to enhance more favorable conditions for investments in energy efficiency renovation by private investors the main recommendation was to decrease risks associated with investments. The combination of energy efficient deep refurbishments with other, more profitable measures, such as RES measures or district heating networks, can provide more positive returns on investments for private investors. Furthermore it should be explored to apply more tax exemption instruments to unlock private investments. For instance, tax holidays (Croatia) or reduced VAT (Spain). And, to decrease the risk for private investors the use of guarantee funds (instead of loans or subsidies) can provide a higher rate. Third, to incentivize joint and integrated projects it was recommended to design subsidy schemes that better address the current demand. For example, include financial support for the development and the design of integrated projects that include both energy efficiency and other measures towards urban regeneration. The final recommendation was to harmonize the methods and frameworks for energy performance (EPC) calculations between states, so that benefits becomes transparent and comparable for investors.

Main Issue 3: Developing and Fine-tuning Legislation

Main issue and barriers:

The main issue at stake is that energy legislation, from the European directives up to the local authorities, does not facilitate the accelerated integration of energy efficiency in urban regeneration processes. The associated barriers that underline this main issue are the following:

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First, current energy regulations have great influence from Northern Europe needs and do not address the particularities of the Southern mild climates. As such, the energy consumption in Southern climates is closely related to cooling rather than heating. Consequently the energy consumption for heating by residential housing in the Mediterranean area is much lower than it is in the North, making investments based on EU-directives less beneficiary.

Second, energy regulations impose barriers to self-consumption and discourages the use of renewable energy, in a place where natural resources are availability, such as solar energy, and the exploitation is fully feasible (in Spain and to a certain extent as well in the Netherlands – see the discussion around the Dutch 'salderingsregeling' or 'netting arrangement').

Third, legislation adapted to housing ownership structures in case of (deep) renovations of buildings is lacking and unclear in some cases. Until recently, in Croatia, it was not possible for any agreement, concerning the renovation of a building, to be reached. If a single owner expressed to have an issue with the measure, the renovation could not take place. Currently, the decision making process has been moved to majority decision, but is still lengthy in the case of absence of owners and should be improved.

Solutions

To address these main issues and associated barriers, an obvious solution is to work on the repeal or change of the regulations that do not favor energy efficiency. Militancy and involvement of technical bodies as well as civil society in this area is considered crucual.

A next step would be the development of technical regulation, with ambitious targets aimed at energy efficiency in building rehabilitation processes specifically. This regulation should have a vision for integrated application in urban regeneration processes.

Local ordinances which require specific energy efficiency measures would encourage good practices at local level. Still this cannot solve the problem of a national legislation not serving to promote energy efficiency and use of renewable energies. For example, in order to deal with complex ownership structures in Croatia the introduction of a new Housing Act, which would give each apartment building a legal identity, could help. This act will help in clearer legal definitions of managerial activities either through the law or the by-laws and regulations are developed.

Strategies

The collaborative analyses in the three countries did result in the first contours of a strategy for this. The coupling with the formulation and implementation of the NEEAPs is an obvious route. The results of the country studies can be used to intensify NEEAP-policy in each of the three counties, at both national and local level. Furthermore, the solutions that were generated in each country study can be used to operationalize the NEEAPs, at least for the participating cities, Bilbao, Osijek and Utrecht.

Recommendations from the European workshop

From the conclusions of the country studies regarding energy efficiency and urban regeneration legislation several remarks were made. In general it was acknowledged that the rather hierarchical, top-down structure of urban planning can be in conflict with the bottom up

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tendency of energy efficiency initiatives (e.g. energy cooperatives). Furthermore, legislation should be more adaptive and flexible. For instance, the tendency of EU and national legislation to have little real participation of local level policy makers should be envisaged to change. Similarly legislation should also be able to cope with the diversity of building types, ownership and climate zones, also in light of further climate change. Finally specific legislation regarding the energy efficient renovation of cultural heritage should be adopted, taking into account the often protected status of these sites and buildings.

One of the main recommendations is to improve the coordination among policy levels when developing legislation. Involving local and regional governments in the national (and European) developments in a more collaborative process is advised. Furthermore, it is strongly recommended to unlock the organizing capacity of grass roots initiatives. This could be achieved by looking at small changes in the legislation that could hinder these initiatives and remove these barriers. In order to stimulate more energy efficient refurbishment projects it was recommended to explore the opportunities of public energy service company (ESCO) constructions. Under such schemes a local authority is in as risk taking actor. This, however, meets certain restricting legislation again, when scaling up. Room for experimentation in the legislation should be strived for.

Regarding the Energy Efficiency Directive Art. 4 about the National Member State Building Renovation Strategies (as part of their National Energy Efficiency Action Plans – NEEAPs) it was recommended to coordinate this legislation with regional and local governments. One solution is to make it compulsory for the local level to be engaged in national planning (i.e. EED Art. 4 Plan). Second, the intermediate level of government, associations of cities, metropoles and regional representatives should develop more peer-to-peer learning, also to be able to influence national policies in a more coordinated manner. Finally, it is recommended to share data among authorities and utilities in a more transparent way and make use of mapping tools for identifying those neighborhoods that have the highest potential of improving the energy efficiency.

Main Issue 4: Integration and Coordination Efforts

Main issue and barriers:

The main issue here deals with the 'horizontal ' integration of energy efficiency in urban regeneration processes and the 'vertical coordination of public policy levels working together with each other and with private and civic stakeholders. The associated barriers are found in each of the national clusters:

The high complexity of funds and subsidies and the lack of coordination between different areas creates a barrier for the integration of energy efficiency in the rehabilitation and urban regeneration activities. The lack of a single contact (a "one-stop-shop") which brings all of them together created a great disorientation at the target audience of the funds and subsidies.

The lack of organizational structures at public authorities (energy efficiency and urban regeneration are traditionally different departments) and resources (both: organizational, economic and human) to create multidisciplinary teams to develop cross-cutting projects prevents the integration of energy efficiency in urban regeneration processes in the first place.

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Finally there is a lack of integrated planning at the district or neighborhood level. Current urban planning practice does not automatically integrate aspects of energy (or environmental in general) from the beginning. There is a lack of diagnostics and planning instruments at neighborhood level that hinders the incorporation of energy efficiency at this level. Therefore the energy rehabilitation is too often limited to the building level only.

Solutions

For tackling the above mentioned barriers the following solutions were suggested. First of all, by integrating energy efficiency with urban regeneration via combinations of particular improvements of dwellings and the regeneration of districts with energy efficiency measures. This also was mentioned earlier as a solution to improve awareness for energy efficiency (see issue 1). However, this targeted integration of energy efficiency in urban regeneration projects might lead to new integration and coordination challenges as well. To achieve the desired integration, opportunities to connect energy efficiency measures with other prioritized and "obvious" needs that require improvement or regeneration of dwellings (buildings), should be organized. Next, by creating targeted opportunities for implementation of energy efficiency-measures in specific regions: each area has different needs to be addressed. The creation of one-stop shops (offices) could also contribute here.

A second solution is the streamlining of the whole planning process for prioritizing, funding, monitoring and evaluating energy efficiency-measures (projects) in a transparent way. This should be based on accessible databases of dwellings (buildings) and areas, which can guide actors through these complex processes. Also, energy efficient renovations of buildings or districts within urban regeneration processes include the planning of city authorities (urban regeneration), regional authorities (spatial economic development) and utility companies (gas infrastructure, electricity infrastructure). Streamlining the planning processes of each of these stakeholders, by connecting their planning can already result in more efficient upgrades of urban districts. An interesting example is to use the pending renewal of gas infrastructure (topic in Netherlands) for gearing energy efficiency measures at the house stock, street or district level. In case gas infrastructure is replaced by district heating than energy efficiency becomes more urgent and beneficiary.

The case of consortiums in Catalonia (Spain) is another a good example of integration and cooperation: they have regulatory capacity and one-stop shop for citizens as well as a common interdepartmental strategy with the allocation of overall budget (shared resources). In this sense the importance of having a clear overview related to the management structure was stressed by supplying enough resources dedicated to the management of such complex processes.

Finally, in order to enhance the demand-supply coordination, the urban regeneration processes need to be outlined in a more transparent way for all parties involved. Each of the parties involved need to have insight in the entire integrated process of implementing energy efficiency measures in urban regeneration. In this way, they can decide when to step in and offer their services and expertise. This includes the need for an improved dialogue between suppliers (technicians) and demand side (home owners, residents) for energy efficiency measures. This cuts both ways: more tailored and clear information for consumers and a better training or education for suppliers. In addition, the surfacing of opportunities and implementation of measures should not be confined to the technical domain and discipline. Also other disciplines

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must be activated to contribute to this. This calls for a genuine attempt to move away from a technical-supply oriented approach (only), and work towards more functional-demand oriented work processes.

Strategies

The main strategy proposed for fostering integration and coordination was to deliver area or neighborhood based plans/ strategies, in which all different partners (departments, institutions, private stakeholders) would need to integrate. An example of the Consortiums in Catalonia (Spain), mentioned above, was taken as a good example to build upon further. In this scenario, decisions and investments for each of the issues will have an impact in the necessity to make decisions or investments in the other. For example, zero energy homes may decrease the need for investing in the renovation of the energy network infrastructure. In turn, investments in the renovation of the energy network infrastructure may call for investments in the (re)development of the designated urban area.

With regard to the need for coordinated strategies, streamlining the connection between EU-legislation and concrete measures in urban districts is a genuine challenge for public, private and civic actors at the local level. The translation of the EU-directives into NEEAPs and of the NEEAPs to the city's energy action plan is the first step.

Recommendations from the European workshop

The country studies also showed evidence for the need for improved integration and coordination. This issue is much in line with the targets of the FosterREG project and many suggestions for solutions, strategies and proposals for improvements have been made in the different national clusters. The European wide workshop provided the following additional insights.

Regarding integration and coordination of energy efficiency and urban regeneration the main conclusion was that legislation should be aiming at the district scale, for instance the legislation dealing with renewables should go beyond the building level and into the district and urban scale. The use of district EPC levels would contribute to that. Furthermore, to prevent that legislation from the European level not 'landing' in local projects, European policies should take the differences in local and regional situations much more into account. An important topic raised here was for instance the barriers identified on ownership of land and/ or building; which was deemed to be solved before energy efficiency issues could be addressed effectively.

To improve the integration of energy efficiency and urban regeneration and to enhance the coordination between government levels the main recommendation coming from the FosterREG collaborative analysis is the necessity of local level involvement in national and European policies. Management mechanisms should be in place to facilitate this involvement. The developments towards the European Urban Agenda are therefore very promising. It was recommended to stimulate the involvement of municipal authorities in the European Urban Agenda and in the national Urban Agendas, for instance in the Netherlands.

In specific, to support the integration of disciplines it was recommended to focus mostly on the local level and to foster interdisciplinary brokering activities among officers working on energy efficiency and/or urban regeneration. To this end, resources for management at local level should be offered, as it is here, where the actual implementation is taking place. Furthermore,

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efforts should be made to identify new windows of opportunity to integrate energy efficiency further with. For instance the renewal of gas infrastructure (in Netherlands) could be an interesting opportunity for this.

Regarding the coordination between various governmental levels the main recommendation is to include inputs from the local and regional level and to include them from the start of the process. One of the pathways for municipalities could be to organize coordination meetings and to consolidate the work of several cities together, creating power towards national level (National government to play role in transition between local policies and EU policies). Furthermore it was recommended for the European Commission to request municipalities to have integrated strategies (including management and coordination tools) in place when accessing European funds (such as ERDF). Local level governments should be involved in the design of funding schemes in order to reach maximum effect.

Finally, not only the coordination among governments was found to be relevant, but especially the empowerment of local citizens and grassroots initiatives has to be reinforced in order for those initiatives to become part of the dialogues. Bottom-up initiatives should be facilitated more strongly and put in their strengths. When developing policies these initiatives need to be taken into account thoroughly.

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