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BUILDING RESILIENT REGIONS AFTER A NATURAL DISASTER

“ABRUZZO 2030: ON THE WINGS OF L’AQUILA”

ISSUE PAPER

Forum – 17 MARCH 2012 Laboratori Nazionali del Gran Sasso, L’Aquila



This document was prepared by the OECD-Groningen research team, in the context of the study “Abruzzo 2030: on the Wings of L’Aquila” which has been financially supported by the Department for Development and Economic Cohesion in the Ministry of Economic Development (National Operational Program “Governance and Technical Assistance ERDS 2007 – 2013) and the Comitato Abruzzo (Business Association and Unions).

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BUILDING RESILIENT REGIONS AFTER A NATURAL DISASTER

ABRUZZO 2030: ON THE WINGS OF L'AQUILA

ISSUE PAPER FOR THE FORUM OF 17 MARCH 2012

This issue paper serves as a basis for structuring the debate at the Forum which will take place at Gran Sasso National Laboratory in L'Aquila on 17 March 2012, under the aegis of the Regional Business Association and Unions. This issue paper does not intend to provide operational recommendations but it does outline some possible guidelines for action. These will be formulated in more detail at a later stage, in response to feedback from the Public Forum and further research including the survey undertaken for this research project and the results from the questionnaire addressed to the central and regional institutions.

The aim of the Public Forum is to foster public engagement, to gather feedback, and to facilitate discussion between interested citizens, firms and institutions, regarding the preliminary assessment by the OECD-Groningen research team of the development gaps in Abruzzo, the issues for consideration, the thematic priorities and the possible guidelines for action. The Open Forum also provides an opportunity to share experiences with other international regions that have faced or are still facing similar recovery and strategic development challenges following a natural disaster. The hope of the OECD-Groningen research team is that the Public Forum will provide an opportunity to facilitate discussion and to start the rebuilding of trust. The open interaction between all members of the community is essential for fostering interest, ideas and engagement, all of which is necessary for establishing a long term development strategy.

The OECD-Groningen research team will complete by December 2012 the study to provide options for an integrated development strategy for the Abruzzo region and to counter the effects of the earthquake shock; this study has been financially supported by the Department for Development and Economic Cohesion in the Ministry of Economic Development (National Operational Program "Governance and Technical Assistance ERDS 2007 – 2013) and the Comitato Abruzzo (Business Association and Unions).

This paper is structured as follows. Part 1 provides a short introduction to the context and the issues being considered. Part 2 sketches out a framework for discussion by outlining the choices facing L'Aquila, its surroundings and the wider Abruzzo region, and suggesting possible guidelines for long term development options. Part 3 provides an overall assessment of the main development gaps which currently prevent the region of Abruzzo, and the province of L'Aquila, from fully exploiting the potential for economic and social development. Part 3 also considers six "thematic priorities" for a long-run regional development strategy that form the basis on which the options outlined in Part 2 are constructed. These priorities are:

1. Fostering accountability and participatory multi-level decision-making
2. Developing capacity, infrastructure and institutions to increase risk prevention and management of future natural disasters
3. Re-branding the region of Abruzzo and the city of L'Aquila
4. Improving networks, awareness and skills among the business community and strengthening

connections between universities, research institutes and business

5. Unlocking the potential of sustainable resources
6. Clarifying the cultural, heritage and artistic values to be preserved in the strategic restoration for the city of L'Aquila, and explicitly distinguish these from the changes to be implemented in L'Aquila redevelopment plan.

The OECD-Groningen research team are very aware of the grief and suffering experienced by the people of L'Aquila and its surroundings, and the wider Abruzzo region. The degree of pain and sadness affecting so many citizens is enormous and at all stages of the project the OECD-Groningen research team have endeavoured to be mindful of this. However, after almost three years since the 2009 earthquake it is important to find ways for the community to move forward to a better future. The issues dealt with in this project are very challenging and consideration of these issues will require a great deal of reflection and on the part of all concerned.

The views expressed in this paper are the result of more than fifty face-to-face interviews, plus additional background desk-research, undertaken by members of the OECD-Groningen research team with a wide range of business, governance and civil society stakeholders from the L'Aquila province, the Abruzzo region, and other regions of Italy. Additional discussions with international experts have also been conducted by the research team. The OECD-Groningen research team are grateful for the openness and willingness to participate in the project shown by so many individuals and stakeholders and we look forward to ongoing and constructive participation with as many members of the community as possible over the coming months.

The drafting of this issue paper was coordinated by Monica Brezzi (OECD) and Professor Philip McCann (University of Groningen) on the basis of contributions by members of the OECD-Groningen research team Lorenzo Allio (OECD), Alberto Bazzucchi (CRESA), Monica Brezzi (OECD), Claire Charbit (OECD), Alessandra Faggian (Ohio State University), Simona Iammarino (London School of Economics), Lelio Iapadre (University of L'Aquila), Philip McCann (University of Groningen), Joaquim Oliveira-Martins (OECD), Andrés Rodríguez-Pose (London School of Economics), Matthias Ruth (University of Maryland), Maria Savona (University of Sussex), Riccardo Scarpa (University of Waikato), Marco Valente (University of L'Aquila), Frank Vanclay (University of Groningen), Paolo Veneri (OECD).

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BUILDING RESILIENT REGIONS AFTER A NATURAL DISASTER *ABRUZZO 2030, ON THE WINGS OF L'AQUILA*

PART 1: INTRODUCTION TO THE CONTEXT AND ISSUES

1.1 The project context

1. Almost three years on, and the Abruzzo region in Italy is still struggling to recover from an earthquake that killed 308 people, destroyed many buildings and damaged infrastructure, especially in the city centre of L'Aquila (the Regional Capital), which extends over an area of 170 hectares. Prior to the earthquake, Abruzzo had been growing at a lower rate than the rest of Italy and also many other OECD countries, and continuing weak regional growth is expected for the coming years. Unemployment has increased in recent years and by 2010 the unemployment rate was 8.5%, a value higher than the national and OECD averages. While the region's stagnation dates back to the late 1990s, the shock of the earthquake has significantly compromised the region's development efforts.

2. This project, *Abruzzo 2030, on the Wings of L'Aquila*, which is jointly undertaken by the OECD and the University of Groningen, aims to provide options for an integrated development strategy for the Abruzzo region and to counter the effects of the 2009 earthquake shock. The questions addressed by the project concern the extent to which the entire region of Abruzzo, and the province of L'Aquila in particular, are using this event to design strategies to recover from their long-term weaknesses; and the extent to which Abruzzo and L'Aquila are building on their existing strengths and potential, and tackling their common long-term challenges. Questions are also asked regarding the extent to which those institutional changes and capacity improvements required in order to implement a development strategy that embraces change and leads to better outcomes, are being identified and addressed. Third, the project is also functional to the creation of policy and governance options for rebuilding a stronger and more prosperous region in the long-term. Strong emphasis is placed on the need for regional development strategies to clarify expected outcomes and their links with priorities and actions. Indeed, international experience suggests that beginning to measure the key outcomes of a region's strategy is critical for monitoring progress, for allowing adjustment, for increasing accountability and for motivating citizens and policy action. Finally, the project provides a timely opportunity to exchange policy practices among OECD regions with recent related experiences of natural disasters, albeit at different scales.

3. The current project takes as its analytical departure point the earlier work undertaken by the OECD. In the aftermath of the 2009 earthquake, the Regional Development Division at the OECD became engaged in the strategic thinking for the re-launching of a sustainable development agenda for the L'Aquila area after the earthquake. The workshop organized in July 2009 represented an important opportunity for the Italian Government to gather ideas to translate the

crisis and emergency into an opportunity for a 'rebirth' of the area affected by the earthquake.¹ On that occasion it was emphasised that there was the need for a change of vision regarding the strategic choices for the redevelopment of the area, with knowledge and innovation being the primary building blocks. Such a vision, it was stated, should also be accompanied by clear coordination and information-sharing among the multiple government bodies, as well as with the private sector, the University of L'Aquila, residents, students, and all other members of civil society.

1.2 The issues and challenges

4. This project emphasises the importance of building *resilience* as an essential basis for a long term development strategy. The *resilience* of a region is here defined as the ability to withstand, to adapt to, and to recover from, external adverse shocks. The need to promote long-term resilience in a region is essential in order to improve opportunities, to strengthen local comparative advantages, and to enhance long-term wellbeing. This is particularly critical in places that are exposed to the threat of natural disasters, the occurrence of which can abruptly force a rethinking of the development model adopted. Efforts to bolster resilience to future shocks requires first and foremost policy and action to increase risk prevention and management, to improve the safety of people and business living in areas at risk of natural disasters, and to organize systems, institutions and capacity to anticipate, mitigate and cope with future disasters. But, just as importantly, building resilience means to help a community become generally less vulnerable to external adverse shocks, so as to achieve a better long-term standard of living, especially in regions that experienced a comparatively lower level of economic activity prior to the disaster.

5. Using the concept of *resilience* implies that while the area hit by the earthquake is embarking on a long reconstruction process, a feasible vision is also needed of what the region can become in some years from now and what the area of L'Aquila can offer while the reconstruction takes place. Since today's decisions impact the options available for long-term sustainable development, reconstruction efforts need to be integrated into a coherent strategy of economic and social development focused on the economic potential and job creation of the entire region. The tension between short-term and long-term objectives is addressed by looking at what has happened and has not happened since the earthquake. This is because some of the policy options discussed after the earthquake may be no longer available and also because the past three years have affected citizens' and businesses' choices and expectations. For this reason, a strong emphasis has to be put on the need for the regional development strategy to clarify the intended outcomes of the policy, the links with the chosen priorities and actions, and the ways to measure results.

6. Almost three years later, it appears that the Abruzzo region, and the L'Aquila province in particular, are in many ways: fragmented in terms of perspectives and views; facing difficulties in moving forward as a community; experiencing difficulties in looking outwards so as to foster a new development vision; and struggling with the creation of the critical momentum necessary to achieve the required scale in social and economic activities. The priorities for an integrated development strategy presented in this paper therefore all aim at building on existing local

¹ See "Spreading the eagle's wings so it may fly: re-launching the economy of L'Aquila region after the earthquake", OECD July 2009

knowledge and strengthening the cultural and economic networks as a major tool for growth, as well as promoting information sharing, transparency and accountability.

7. Overall, first indications suggest that the multilevel governance related to the design and implementation of a long-term development strategy is challenged by the “extraordinary” institutional post-disaster setting as well as by serious implementation bottlenecks of “ordinary” administration. Returning to a sustained path of economic growth in Abruzzo will require strong leadership from local and regional policy-makers, allied with innovation in the coordination systems and mechanisms among the multiple government agencies, the private sector and the civil society. A key component for the success of such a strategy is to restore trust.

PART 2: A FRAMEWORK FOR DISCUSSION AND GUIDELINES FOR ACTION

2.1 L'Aquila can become a *smart city*

8. Faced with the daunting challenge of rebuilding a city after a major natural disaster, the choices that the people of L'Aquila are making will have irreversible and fundamental implications for their lives and those of their own children and grandchildren. Responding to these choices and facing the challenges requires cohesion and a strong sense of community.

9. An urgent and immediate rethinking regarding possible innovative pathways for reconstruction in the city centre is essential. The recent publication of the L'Aquila reconstruction plan, allied with the fact that little has so far actually been rebuilt in the city centre, actually provides an opportunity to change the long-run trajectory of the city.

10. Much of the current situation in L'Aquila regarding redevelopment appears to reflect a largely fragmented, uncoordinated and individualistic approach, with a short-term perspective. The focus for action is dominated by the need to have as many buildings rebuilt as they were before the 2009 earthquake as quickly as possible, with few changes to the broader regional economic, institutional, educational and environmental fabric envisaged.

11. The current redevelopment approach appears to be characterized broadly as being - first rebuild, and then secondly find ways to move on. This approach, while being perfectly understandable given the scale of the disaster and the grief and suffering of the community, will almost certainly miss out on wider and longer term opportunities for growth and development.

12. An alternative approach, which can be characterized as – first decide what we want to be, and then secondly rebuild accordingly – situates the potential of L'Aquila within the wider context. A choice for a change towards a new future for L'Aquila requires a change of focus, and a change of thinking, in which L'Aquila is seen in a broader regional, national and international context. If citizens fail to make an explicit choice for change towards a new future, L'Aquila will increasingly become a fragmented community and eventually a forgotten backwater with no discernible long-term development potential.

13. L'Aquila and the wider Abruzzo region have the opportunity to be a prototype and a template, for modern twenty-first century living: a place which explicitly builds on, interlinks, and celebrates its heritage, its culture, its environment, and its science and technology, and does so with the express intention to involve all of society in the creation of high quality living for future generations. L'Aquila can become a “living laboratory” - a case study - of how a community can come together to engage in the re-design, the re-thinking, and the re-launching of its own future. This vision for L'Aquila can be encapsulated in the concept of a *smart city*, a city which exploits new technologies to enhance the quality of life and wellbeing of all of its citizens, young and old.

14. The redevelopment of L'Aquila as a *smart city* and the re-branding of the Abruzzo region as a place of science, sustainability, heritage and beauty, must be backed up by many showcase examples, demonstrating that the community is on the move, embracing ideas for change, and being innovative and creative in searching for solutions.

15. Implementing this new vision is fundamentally about shifting the emphasis from physical reconstruction to economic and social development; from the short and medium term to the medium and long term; from a rather fragmented to a socially integrated approach; and from a local and largely domestic view to a wider national and international perspective.

16. Constructing a *smart city* will require an active choice on the part of the community, backed up rapidly by purposeful, powerful and concrete actions and commitments. It will also require the emergence of many people to drive the vision and to implement the required actions, and a radical rethinking of many aspects of the immediate short-term reconstruction and redevelopment response.

17. In marked contrast with the status quo, the *smart city* approach, along with each of the other elements described below, may well also imply fundamental changes in roles, responsibilities and the requirements of many people in order to support the work of the existing governance institutions. So as to foster wider public engagement, these changes are also likely to imply changes in the levels of scrutiny and transparency on the part of many individuals and (private, public and civil society) institutions. As such, it may be uncomfortable for many people in the short term, and it will place real and new demands on people who previously have not had such responsibilities.

2.2 The components of a new vision for L'Aquila and Abruzzo

18. A *local smart city* concept implies radically redesigned energy systems alongside other utilities, and all of which should be integrated into all aspects of the urban fabric. Priority should be given to the adoption of smart energy innovations, the application of modern construction technologies and building materials in the design of new living and workspaces, and to the use of these innovations and technologies in ways that celebrate and enhance the city's heritage. Rebuilding L'Aquila as a smart city allows the reconstruction process to take advantage of the opportunities for using new technologies, systems and material to provide new types of workspaces and living spaces for a wide range of different people. Modern creative and flexible workspaces ideal for new business models could be conceived. Efficient energy systems and redesigned housing interiors ideal for the heating and mobility needs of ageing households could also be exploited. All of these could be integrated with local and innovative transport solutions, appropriate for young and old of L'Aquila and its surroundings.

19. A *local smart city* approach targeted at a more local level also has to be integrated at every stage within a *wider provincial and regional tourism strategy*, based on highlighting the sustainability synergies between the natural and the (renewed) built environment. The "living laboratory" principle means that all newly redesigned and rebuilt spaces and places would become showcases explicitly demonstrating these innovations, and as such, they all become part of the tourism offering, along with the natural environmental, cultural and heritage assets.

20. The links between the reconstruction of L'Aquila and its surroundings and the wider economic development implications for Abruzzo also need to be exploited by means of *regional smart specialisation strategy*. A *regional smart specialisation strategy* is developed in order to prioritise goals and concentrate the use of resources on the most promising region-wide economic opportunities. Such a strategy must be based on an analysis and evaluation of the economic strengths of the region, the linkages between institutions and firms, an assessment of the emerging technologies of the region, the demand of local and regional industries for mid-level and advanced-level skills, an identification of the bottlenecks and missing links currently inhibiting such systems, and the establishment of new network-based institutions which better link businesses to each other and also link businesses to the educational institutions.

21. Policy actions and interventions would have to be crafted so as to exploit and diversify the local skills-base. Accordingly, new systems need to be developed for linking and matching the provision of local skills training and local human capital development at both the higher levels and mid-levels. This strategy should foster entrepreneurship, facilitate technological diversification, enhance the embeddedness of foreign-owned firms, and increase both the internal and external connectivity of the region. Wherever possible, the policy measures adopted should also explicitly link the needs of local and regional industries to the smart city agenda, and to the tourism offering built around the natural environmental and smart city priorities. The establishment and organization of a regional smart specialisation strategy would need to be led by the public sector in partnership with the private and civil society sectors.

22. Any such policy measures should also be underpinned with systems for monitoring and evaluating the progress of the policy. Participatory systems for monitoring societal progress are essential in order to orient policy-makers and allow citizens to assess their actions, to permit policy learning, and to facilitate policy innovation.

23. To realise the new vision, many individuals and institutions, and particularly the private sector and civil society organizations, will have to become newly engaged in the development process in order to complement the work of the existing institutions and leaders. New modes of governance will therefore need to be devised and adopted in order to facilitate this form of *community-lead local development*. Community-lead local development is becoming increasingly important in many parts of the world as a means of effecting local economic, social and environmental change. Participation by civil society and the private sector in development planning is designed to generate a local sense of ownership of both the vision and the actions required, in order to foster long-term engagement, learning and momentum. New opportunities exist for exploring modern financial instruments to permit these changes, and to back up private and community collective actions with public-private initiatives.

2.3 Addressing the reconstruction challenge of L'Aquila

24. L'Aquila city centre is a major cultural, social and heritage asset, and potentially also represents a powerful economic asset for the province and the region. Finding ways to re-establish the long-run viability of the city centre and surrounding real estate markets is critical for wealth creation and for fostering long-term local entrepreneurship and innovation. However, the danger associated with the city centre being out of use for many years is that over time its power as an economic asset dwindles.

25. It is essential to avoid the unfortunate outcome that by the time the city centre is fully rebuilt its economic potential is very limited. This requires that the city centre reconstruction process, along with that of the more outlying areas, is undertaken in a manner which fosters wider long term redevelopment, strengthens the long-term real estate asset base of the local community, and makes the overall area more attractive for future investment.

26. In order for the reconstruction of L'Aquila to help stimulate the wider local and regional economy over the long term it is necessary to find ways to ensure that the reconstruction process itself sparks widespread external interest, well beyond the region, and is seen as offering new long term investment prospects. The reconstruction of L'Aquila must itself therefore be explicitly linked to the wider redevelopment and rebranding of the region of Abruzzo.

27. Exactly how this sparking of external interest might be achieved requires a consideration of the novel opportunities that the reconstruction process offers.

2.4 L'Aquila: architectural competition and a 2019 European Capital of Culture bid

28. Two events could be envisaged to mobilise the local community and provide an external spark to activate interest and excitement well beyond both the Abruzzo region and Italy: These are an *architectural competition* and a bid for L'Aquila to be the *2019 European Capital of Culture*. These projects are highly complementary and require immediate responses.

29. An *architectural competition* has to be sufficiently novel and original in nature so as to attract widespread external interest well beyond Italy, and there are various ways to design such a novel competition, in terms of the architectural brief, the eligibility criteria, the building commitments, and publicity.

30. First, in terms of the architectural brief, the *local smart city* concept and the *regional smart specialisation* strategy provide a specific focus for the architectural challenge, which centres on finding ways to use modern architectural and engineering solutions for changing the interiors of buildings to create modern living, working and leisure, while at the same time preserving and enhancing the historical exterior facades. The architectural brief could focus on celebrating the past as a way of building a new and sustainable future. Such a brief would emphasise the need for designing and building creatively-conceived living and working spaces using new environmental and energy-saving technologies, modern innovative materials and reconstruction solutions, and all of which must be tailored so as to exploit the local skills-base, and to preserve and enhance the beauty and heritage of the buildings.

31. Second, the eligibility criteria of the competition entrants could be exploited as a possible novelty. For example, at least some of the rebuilding projects could be restricted just to students who are currently studying in university architecture departments, and working with their professors. The competition should also be advertised as widely as possible around all European and international university departments.

32. Third, there could be a commitment that many of the winning designs are actually built, as long as the new designs exploiting modern materials and techniques are more cost-efficient than the externally-determined reconstruction cost limits already set. This commitment would underpin

the motivation for the students and universities to enter the competition, and also for promoting the novelty of the competition internationally.

33. The buildings eligible for redesign in the architectural competition could come from all parts of the devastated city centre, and reflect all types of ownership and all types of use, and the design competition should explicitly allow for changes of use. This may require specific legal changes be put in place which open the options for building owners to change the internal fabric of their buildings, to change the use of their buildings (in part or in whole), to cooperate on the re-design and change of use initiatives, to pool ownership.

34. In order to maximize both international visibility and a local sense of ownership, the architectural competition could be overseen by a panel comprising internationally-recognised and world-leading architects and designers, alongside private, public and civil society representatives of the local community. The advertisement of the competition would take place in conjunction with the making of a television documentary and other communications techniques about the nature of the challenge.

35. The architectural competition, along with the local smart city concept, the regional smart specialization strategy, and the community-lead local development approach, could all form the basis of a bid by L'Aquila to be nominated as the 2019 European Capital of Culture. By integrating and structuring all the elements described above, L'Aquila could be in a serious and credible position to bid for the 2019 European Capital of Culture award. The initial calls for the 2019 European Capital of Culture bid will be opened in late 2012 with the final comprehensive submissions due by late 2013. L'Aquila has eight months to formulate and table an initial preliminary bid, and if successful in the initial round, it then has less than twenty months for a final comprehensive proposal to be submitted.

36. These two elements, namely the architectural competition and a bid for the 2019 European Capital of Culture, are distinct and free-standing elements, and are both considered as possible mechanisms for sparking external interest in the more fundamental long-term redevelopment issues., which should be driven and built around the *local smart city*, the *regional smart specialisation*, and the *community-lead local development* agendas. Either the architectural competition or the Capital of Culture Bid can be initiated without the other, but if the limited Capital of Culture competition timeframe permits it, a combination of the two elements would be the most desirable approach.

37. L'Aquila has strong physical, cultural and knowledge assets. From this basis, with a new vision, the city can become a powerful example for a new smart model of development in Italy and Europe. If the citizens of L'Aquila act and think together they could make it happen.

PART 3: ANALYSIS OF THE DEVELOPMENT GAPS AND THEMATIC PRIORITIES FOR A LONG-TERM STRATEGY

3.1 The economic and institutional context of the region after the earthquake

38. Although facing severe structural policy challenges, the Abruzzo region and the area hit by the earthquake can rely on comparative advantages and specific resources that, if well exploited, can foster regional growth. The presence of large enterprises, the Universities, the Gran Sasso National Laboratory, the national and regional parks and mountains, the strong local tradition of speciality foods, are just a few of the assets that the region has on which it can, and must, find ways to build. Compared to other rural or intermediate regions, Abruzzo is often very advanced in terms of its thinking regarding innovative solutions (for example on landscape management, knowledge and regulations for renewable energy and energy savings, investment for ICT networks, tourism in small historical centres). However, the region often faces difficulties in adopting and implementing these solutions in a comprehensive and integrated way. What emerges in the research project's first stage of the assessment of the social, economic and institutional characteristics of the region is a high degree of fragmentation, a lack of coordinated strategies, and consequently a difficulty in building appropriate and effective networks. At the same time, there is also a great deal of desire on the part of many citizens, firms, and civil society actors, to engage with, and contribute to, a long-term local and regional redevelopment process. The set-up of a Steering Committee for the OECD-Groningen study on Abruzzo, where Central and Regional Government and Institutions and the European Commission are represented, is another sign of willingness to make the complex multi-level governance work in a coordinated way. It is essential to find ways to harness this goodwill and energy in order to enhance and promote the economic, social, institutional, cultural and environmental dimensions of the region. All of these dimensions contribute to the overall wellbeing of the region, and long-term local solutions will rely on coordinated policies and initiatives, which are locally developed and locally-driven.

39. The Abruzzo region as a whole is at a junction of different economic axes. The main ones are the North-South axis running through the Apennines and the East-West axis connecting the two coastlines, running from Rome Lazio and traversing the country to the Adriatic Sea. On both axes the Abruzzo region, and the L'Aquila province in particular, are the middle, but given the globalisation trends over the last twenty years, Abruzzo now finds itself in a rather difficult position, in that economically it has been drifting downwards over recent years. In various economic dimensions, including the presence of some major multinationals and high levels of exports, the region can be characterized economically as sharing various features with the broad centre-north whereas socially and institutionally it shares many features with various parts of the *Mezzogiorno*. However, the impacts of modern globalization, reflected in increasing levels of international out-sourcing and off-shoring, increased competition from overseas, combined with the rising prominence of core-city regional economies, means that over time Abruzzo is likely to increasingly exhibit the characteristics of a peripheral region, unless it finds ways to increase its

linkages with other regions. The consequences of geographical peripherality are particularly marked in the case of the western part of the Abruzzo region, in the vicinity of the province of L'Aquila, which has only a small share of the region's population and output. In many ways, the province of L'Aquila lacks the scale and location advantages of other areas, and increasingly exhibits economic features characterised by parts of the south of Italy. Overall the long run trajectory of the Abruzzo region, and in particular the province of L'Aquila, was rather fragile even before the 2009 earthquake. A long-term response to this fragility in order to best position both L'Aquila province and the Abruzzo region as a whole for the future, therefore requires consideration of the governance and institutional features of the region, a careful appraisal of the development possibilities, and an associated locally-tailored development plan with related policy-designs. The need for this was already clearly evident prior to the 2009 earthquake in L'Aquila, and this rather fragile positioning reflects the economic and institutional context in which the 2009 earthquake struck.

40. The immediate aftermath of the 2009 earthquake was characterised by external interventions, in which national authorities and centralised policies played a key role in the reconstruction and recovery processes. At that time, the initial response approach adopted by the external actors was primarily a technical, rather than social one, and at least two reasons were seen as justifying such types of intervention. First, unlike other earthquakes in Italy, the L'Aquila earthquake was unusual in that it directly hit the local and regional governance centre. As such, in the early days after the earthquake the local administrative capacity was itself devastated, and external and centralised actors were therefore required to shoulder much of the burden of the immediate response. This burden focused primarily on the construction of earthquake-proof housing in available places in the vicinity of the devastated area, and often in the surrounding villages. The new housing developments were geographically scattered, depending on the availability of land and the immediate local development possibilities. Second, the intervention by external actors was intended to best ensure the smooth flow of funding into the region and also to ensure that financial injections into the region associated with reconstruction funding would be well channelled.

41. In contrast to other recent natural disasters such as the earthquake that hit Umbria in 1997, in the case of Abruzzo, any attempt at bottom-up engagement and leadership by local and decentralised civil and institutional actors was unsuccessful. Various reasons, both internal and external to the region, may explain such failure. With regard to the earthquake reconstruction and local development agenda, no long-term and ongoing local momentum for action has so far been developed and sustained. None of the grass-roots initiatives that were launched in the aftermath of the disaster have been able to lead to systematic actions or the advocacy of specific objectives. The initial dominant role of the external authorities has subsequently been replaced by something of a local leadership vacuum, at least as far as the earthquake reconstruction and local development agenda is concerned. Therefore, in spite of the best intentions and efforts on the part of local, regional and central government officials and community leaders, unfortunately, as it turns out, the initial and significant external mode of intervention and governance has both resulted in, and also been a result of, the local institutional and governance deadlock. As a consequence, the initial extraordinary and direct response to the immediate technical needs of the local built environment is increasingly ossifying into a permanent, scattered and incoherent solution to the social needs of the community. This fragmentation and ossification exhibits various dimensions, relating to the industrial and commercial characteristics, the governance and

institutional issues, the rebuilding and reconstruction agenda, and the redevelopment and social issues. It is to these which we now turn.

3.2 Industrial and economic characteristics of Abruzzo

42. The industrial structure of the region, and particularly the L'Aquila area, is characterised by a very large number of very small firms, a small number of very large multiplant firms (MPF), multinational enterprises (MNE), and very few medium sized firms. One of the reasons the large firms remain anchored in the region is that the human capital resources locally available are strong, so the linkages between the large firms and the local skills base is very important. On the other hand, as a whole, there are very few local economic linkages between local firms, with limited inter-firm downstream or upstream networks. The small number of large multiplant, multinational and global companies in the western part of the region rely on only a very few specialized supplier ties with local small and medium sized enterprises (SMEs), while local SMEs themselves exhibit hardly any inter-firm linkages and networking capacity. This fact is worthy of particular attention, given the fact that over recent decades many parts of Italy have been renowned internationally for very intense and extensive linkages between local firms of all sizes and types, both between MNEs and SMEs and also between SMEs. This feature, namely a lack of extensive inter-firm linkages, is a feature of the L'Aquila and Abruzzo, and not an Italian phenomenon.

43. While a few small initiatives aimed at fostering the design of a regional industrial policy framework have been recently undertaken, such as 'Abruzzo 2015' and "Fabbrica Abruzzo", it is too early to say anything about their success. Furthermore, in the province of L'Aquila there is a noticeable lack of local technical support, legal and financial advice, or technological brokers, necessary for fostering regional networks. There is no overall inventory of skills capacity, local labour demands, or local technological requirements that people are aware of. Moreover, entrepreneurs are either not fully aware of, or are largely sceptical about, the few existing business-support services available. This is arguably both the result of, and also a contributor to, the lack of any clear and widely-shared local industrial vision. This lack of any overall audit and inventory of activities and initiatives also leads to overlapping entrepreneurship promotion activities, the result of which is duplication and an absence of any coordinated strategy.

44. Key local institutions that potentially could serve as catalysts in this arena are noticeably absent. The local universities and research institutes exhibit almost no connections with the local business community. Universities are playing little or no explicit or strategic role in the development or redevelopment of the region, and no real perspective or vision regarding the role of the local university sector in the long-term development of the region is evident. As with the commercial and entrepreneurial sector, the scenario again appears to be one of a duplication of initiatives and programmes, with an associated failure to achieve economies of scale.

3.3 Environment and energy-related issues

45. Given its natural environmental assets, Abruzzo and the province of L'Aquila could potentially offer a consistently high quality supply of tourism services. Yet, in spite of having very high quality natural environmental and cultural heritage assets, the local tourism industry has shown over time a serious inability to pursue an aggressive and coordinated campaign for promoting the region.

46. The two main apparent reasons for the lack of an effective promotion of the region are the absence of any integrated tourism information, search, booking, marketing, sponsorship or promotion platforms, and the lack of an international dimension amongst local tourism providers (particularly in the internal areas of the region). As a whole, the supply of opportunities for tourism appears to be neither harmonized, nor coordinated, nor adequately informed, for example, by large scale web-based portals. In terms of customer service, customer follow-up, branding, marketing and other such efforts to build customer loyalty is lacking. The result is that activity-based events and tourism experiences in the L'Aquila province fall short of the expected standards regularly enjoyed by visitors elsewhere, including many places with less valuable resources and assets. In terms of broadening the access by international visitors, the recent planned upgrade to a grade 3 airport by the local authorities, might soon offer the opportunity to some low fare airline companies to schedule some regular passenger flights directly to L'Aquila.

47. A possible tension between the goal of preserving the natural landscape and biodiversity and developing environment-based tourism is often perceived, with the result of a lack of strategic management of the natural assets.

48. In terms of energy provision, the local utilities are fragmented. While fragmentation and limited competition were the norm prior to the earthquake, no overall comprehensive energy strategy is being laid out for the region, in the light of the earthquake impacts. Decentralised local energy systems allied with smart metering are options to be considered in the reconstruction and redevelopment process, given some of the local technical expertise. However, no overall strategy of this nature is being tabled. Progressive thinking in this arena was not well-established in the region prior to the earthquake, and has not evolved significantly since the earthquake either, except amongst a small number of individual actors.

3.4 Governance and institutional issues

49. In terms of institutional issues, there is clearly a lack of alignment and coordination between different levels of government. Such a lack of alignment pre-dates the earthquake, but the earthquake exacerbated the problem and highlighted the ongoing political and institutional failure. Poor accountability and discontinuity of what can be called the “ordinary” governance,² in particular, appear to be the main factors affecting policy formulation, adoption and implementation in Abruzzo. The proliferation of actors across the territory deputised for often partial decisions – a feature which has developed in the region over the past decades – makes decision-making particularly fragmented and potentially cacophonous. While the Regional Statute, laws and administrative procedures are well established instruments, the daily exercise of institutional responsibilities may be rather complex and cumbersome. An example thereof is the common use of “Special Administrators” (*commissari*, for instance in the public health care system; or the management of the national parks) with temporary extraordinary powers that however tend to persist and consolidate over time. Political and institutional/jurisdictional fragmentation yield to local particularism, and hence to the incapacity to identify and manage structural challenges in a strategic and coherent manner. The ongoing political and institutional failure manifests itself in a low degree of trust not only towards the public authorities but also

² As opposed to the “extra-ordinary” institutional setting and distribution of responsibilities in the context of emergency relief and reconstruction of the areas hit by the earthquake.

among different local actors. The almost complete absence of high-quality social capital is a further consequence, which in turn perpetuates the underlying problem.

50. This general diagnosis outlined above holds also for the context of the reconstruction process of L'Aquila, where proliferation and fragmentation have made the post-earthquake relief and recovery processes too complex and opaque to be understood by most potential stakeholders, and inhibited the emergence of an agreed strategy for long-term recovery. Information channels are not user-friendly, and do not contribute to providing the picture of a unified, consistent and effective action. This is arguably due in part to the absence of a clear and established information and knowledge communication system, the lack of which has contributed to the breaking down of civil and social trust and contributed to ingrain a culture of inaction, suspicion and blame on the part of the majority of actors and members of the community. The result has been a self-perceived inability - and therefore also an unwillingness on the part of the key government, political and civil society actors - to assume a leadership and coordination role in pushing forward the reconstruction and redevelopment agenda.

51. This lack of clarity regarding formal information provision, the lack of a much-needed information-flow system, and the absence of a strong and coordinated leadership, has also engendered a lack of awareness regarding the potential role which could be played by non-political institutions and civil society actors in the redevelopment of the region. Against this background, many of the civil society groups have no clear long-term goals and strategy for two reasons. First, many of these groups are comprised of rather ad hoc coalitions of existing and entrenched local interests which coalesced around the 2009 earthquake response. Second, these groups were offered little attention and no serious role by the formal institutions of central and local government in the reconstruction and redevelopment process during the early months after the earthquake. This lack of engagement of the civil society actors by the formal institutions inhibited any possible mutual institutional learning and ruled out the potentially beneficial feedbacks between civil society and public institutions which might otherwise have taken place. The result is that while their motivations are obviously well-intentioned and their aims may well be purposeful, civil society groups have not managed to develop and promote clear goals, a strong focus, and realistic strategies. This lack of focus is also exacerbated by the fact that civil society organizations have no formal channels via which they could put forward proposals that might help unblock the general impasse. This greatly limits their role and they are aware of their inability, resulting in a real sense of powerlessness. Something of a vicious circle is thus triggered whereby poor visibility and impact spark frustration, which in turn reduces the effectiveness and eventually the legitimacy of bottom-up activities.

52. Some recent experiences of economic and institutional integration occurred in the region³ are worth monitoring as practices to overcome a sectoral and municipal approach towards a territorially integrated approach in planning and public policy.

³ For example the metropolitan area of Pescara-Chieti, twinning between Pescara and L'Aquila, agreement for cooperation between the Province of L'Aquila and Teramo on the strategic management of Gran Sasso, the local tourism system of Gran Sasso, the Territorial Integrated Project of Sulmona-Alto Sangro.

3.5 Rebuilding, redevelopment and social issues in the area hit by the earthquake

53. The sense of social fragmentation, which in part was already evident in the community prior to the earthquake, has been exacerbated both by the resettlement patterns, and by the perceived lack of reconstruction and redevelopment progress. Amongst the local community there is a widespread perception that both national and local government actors are insufficiently aware of the degree of hardship and grief faced by the L'Aquila people. In particular, social issues are perceived not to be fully considered by decision-makers, and there is a widespread feeling of helplessness and paralysis on the part of the local people. There is also a widely-shared perception that time is running out for the region's redevelopment, especially as Italy faces major systemic governance challenges. To local people, institutional paralysis is interpreted as lack of the local and regional leadership necessary to keep their needs on the national agenda. However, while the delay in producing a comprehensive reconstruction plan and socio-economic development strategy for the city and province of L'Aquila has been a fundamental cause of inaction, it has also become part of the 'blame-game' between institutions and various groups. Yet, it is also clearly a reflection of the fact that after the immediate post-earthquake response, there was a widespread sense that all post-emergency measures are thwarted by bottlenecks.

3.6. Thematic priorities for a long-term development strategy

54. Given the existing context and the historical background, building trust and community engagement in decision-making is essential. However, such trust and public engagement needs to be structured around a series of thematic priorities which could offer realistic long-term development potential. Carefully-designed actions and interventions under these thematic priorities can be powerful tools for unblocking local bottlenecks and for bridging missing links. Debates regarding the development potential and challenges of the Abruzzo region, and the L'Aquila province in particular, under these thematic priorities can help: to facilitate the building of trust; to foster the building of a greater public knowledge base; and to begin to structure realistic options for action. From the research undertaken so far, six major priorities for development emerge, on which progress needs to be urgently made. These priorities are looked at through the prism of the L'Aquila area hit by the earthquake but they are indeed relevant for the entire region of Abruzzo.

1. Fostering accountability and participatory multi-level decision-making
2. Developing capacity, infrastructure and institutions to increase risk prevention and management of future natural disasters
3. Re-branding the region of Abruzzo and the city of L'Aquila
4. Improving networks, awareness and skills among the business community and strengthening connections between universities, research institutes and business
5. Unlocking the potential of sustainable resources
6. Clarifying the cultural, heritage and artistic values to be preserved in the strategic restoration for the city of L'Aquila, and explicitly distinguish these from the changes to be implemented in L'Aquila redevelopment plan.

Fostering accountability and participatory multi-level decision-making

55. The “governance deficit” in the region is strong and expressed by all stakeholders. Institutional bottlenecks need to be promptly addressed in order to design a feasible strategy of development for Abruzzo. The main elements of difficulty in the multi-level governance of the region seem to be, primarily, a poor accountability and incoherence of policies, linked to a dialogue with stakeholders which is not systematic, poor information sharing, absence of common objectives and a widespread distrust and low engagement of citizens. A situation of generalised poor capacity of (mainly local) public administration and a lack of tools for capacity building intensifies these structural weaknesses. Recent experience at the level of the Region with the design of the so-called *Patto per l’Abruzzo* might be useful to gauge the added value of a constructive dialogue between decision-makers and stakeholders at the early stages of the policy formulation process. A more accountable and participatory governance would not only allow decision-makers to rely on a richer spectrum of evidence and inputs before making their decisions, but it would also force them to confront potentially diverging ideas and argue their case more robustly. Responsibility to enhance the accountability of the interaction and decisions taken by the different actors in the framework of the regional and local decision-making is scattered across various levels, and restoring a smoothly and effectively performing decisional process is a shared endeavour. In this respect, consideration should for instance be given to the need to coordinate the multiple strategies and funds allocated to the region and the sub-national authorities more purposefully and to earmark them to specific output deliverables. The role of external actors (e.g. potential beneficiaries; social partners; sectoral associations; research institutes and think tanks) is critical in this context.

56. The problems highlighted above were amplified in the post-disaster situation of L’Aquila which should imply a decisive effort to create communication networks across different groups and organizations. In this case, there is an urgent need to engage citizenry and new coalitions to embrace change and convey a shared vision of the future of the area hit by the earthquake.

57. In similar post-disaster situations, such as New Orleans in the United States after Hurricane Katrina, the use of timely, accessible and relevant data has prompted policy actions and motivated citizens after the initial emergency phase. The establishment of information platforms that link different stakeholders and measure key outcome of the regional redevelopment strategy has proved to be a relevant knowledge tool to understand whether a better course is being designed and implemented.

58. This information platform should include explicit indicators to monitor progress and achieved outcomes. It could also be combined with a formal stakeholders analysis to clarify: which roles are being played by whom; who provides an audit of the reconstruction and redevelopment actions already undertaken; which actions that have been promised (and not yet completed), and the links between the actions and intended outcomes.

Developing capacity, infrastructure and institutions to increase risk prevention and management of future natural disasters

59. The project so far has brought up a common difficulty for the community to embrace the 2009 earthquake and use the devastating impact as a base on which to build a new future. A sense of denial is still evident in many quarters of the community characterized by a wish to return to

how things were prior to the earthquake. Indeed, this is to be expected due to the trauma and shock following the devastation wrought by the quake. However, it is imperative to use the disaster as an opportunity to re-vision a new future for the region. This is because the scale of the devastation means that it is impossible to return to the past, and as such the future of the region will always be inextricably tied to the shock of the earthquake.

60. Embracing the earthquake means also to put in place policies of risk prevention and mitigation in the areas at risk of earthquakes or other natural disasters. Past experiences and recent disasters in other countries, such as the Great East Japan earthquake, point to the importance to define ex-ante coordination and delegation of responsibilities, organization models and information management structures. Risk management would mean to use this occasion to upgrade infrastructures for improving the safety of people and business (for example in the industrial areas) and to experiment with and implement innovative solutions (for example on the network infrastructure for L'Aquila). By mobilising internal and external knowledge, L'Aquila could become a knowledge reference for other regions on risk management and renewal interventions.

Re-branding the region of Abruzzo and the city of L'Aquila

61. A multi-focal branding strategy must be developed which could be built around the themes of innovation and research excellence, heritage and culture, and environment and tourism, and importantly, the connections amongst these domains: -

- In terms of technology and innovation, the region has some major technological assets both within the local industrial and business sectors and the university and scientific research world – such as the Gran Sasso National Laboratory - which must be communicated to the wider world.
- In terms of culture and heritage, it is imperative to find ways to link the past to the present and also to the future, by creating synergies between the cultural heritage and the surrounding environment and by exploiting the economic potential (in terms of jobs, new enterprises, upgrading of skills etc.) of cultural interventions which in turn may enhance the potential for tourism hospitality (Santo Stefano di Sessanio is widely recognised as a successful example).
- In terms of environment and tourism, the region has wonderful natural and cultural assets on which an effective tourism marketing strategy can be developed – one that could build on the integration of sustainable practices of resource use with new business opportunities and image-creation for the region.

62. The development of a regional brand is critical for communicating to a wider international audience and also to the local community, and this involves the cooperation of a range of cultural, heritage, research, commercial and environmental stakeholders. It also requires the development of a regional vision of how Abruzzo should be “marketed”. Branding is essential for promoting regional trade, regional investment and regional exports. Modern sophisticated branding requires the construction of a database of existing tourism, heritage, technology and environmental assets, and the establishment of procedures and strategies to maintain and improve upon them. These need to be built into integrated web-portal platforms for searching, booking and communicating

local tourism assets and services, as well as the strategies that will be employed to maintain these assets and services. Such portals must be user-friendly for an overseas audience, and the systems must be constructed so that they are appropriate for monitoring performance, providing customer feedback and support, and for dissemination of new tourism-related innovations. Efforts need to be made to increase the awareness of tourism operators about the current expected standards in hospitality. An improved understanding of how to monitor effectively customer satisfaction amongst tourists hosted in the region is also needed, as is a proper network of tourist signals pointing to visitors' attractions across the area. This should cover locations of cultural, religious and natural attractiveness.

Improving networks, awareness and skills among the business community and strengthening connections between universities, research institutes and business

63. There is a priority to develop a strategy for the region designed to help the region's commercial sectors to diversify and upgrade. This is critical because a region's long-run economic growth and development are most successfully fostered via diversification into sectors or technologies that are closely related to those already present in the region, rather than to unrelated sectors. Such a strategy also requires increasing business networks between local firms and fostering the linkages between commercial sectors and the University.

64. The weakness of inter-firm upstream and downstream linkages and business networks points in particular to the lack of specialised suppliers to support innovative activities, low technical, legal and financial advice to SMEs, absence of technological brokers, and absence of coordination among business, social and environmental sector interests. Economies of scale achieved by promoting consortia, integrated platforms or multi-company collaborations, could help to reconvert small traditional activities in small vertical chain activities. It would also help SMEs to reach the critical mass necessary to engage in dialogue with institutional actors and other businesses. Business networking and connectivity should be thought of at different internationalisation modes (export, inward and outward foreign direct investment) but, more importantly, at different geographical scales; - without a stronger local system it would be difficult to create stable connections with the global economy.

65. Similarly to many OECD regions, Abruzzo has to expand the supply of skilled labour and labour participation - in particular in those areas more affected by ageing and depopulation - and improve skill matching. The identification of the "right" skills is an essential first step for the upgrading of technology and human capital and retention. It implies an holistic approach, with the University of L'Aquila and the other regional universities playing a pivotal role not only in the supply of education but also in bridging with local enterprises, by better framing opportunities for internships, promoting contracts for graduate students and designing schemes for technology transfer. However, enterprises must be able to clearly define the skills they require in the next years, overcoming a perceived difficulty of SMEs to express a clear and solvable demand for innovation. The regional government can play a role by making this information available and setting the right incentives to strengthen business-to-business links and university-to-business links.

66. Universities and research centres are critical to create new sources of regional growth, spur innovation via support of primary research and increase regional competitiveness. A strategy to

promote rationalisation, specialisation, and the building of synergies among the three Universities of the region – beyond the immediate needs attracting students - seems necessary to further enhance their role in the economy of the region. A strategy of specialisation for the University of L'Aquila directed to the existing areas of excellence was defined during the workshop organised by the OECD in July 2009. Such a strategy, which comprised a diversified offer such as a proposed Gran Sasso Institute for research in basic science, graduate schools in ICT and environmental engineering and laboratories with local enterprises, could be further pursued (OECD 2009). Synergies and collaboration with the University of Teramo and Chieti-Pescara should also be sought.

Unlocking the potential of sustainable resources

67. It is widely recognised that for development efforts to be sustainable, it is essential for social, economic and environmental strategies not only to be in balance with each other but ideally to reinforce each other in ways that improve the quality of life of people in the region and allow the region as a whole to flourish. Tremendous opportunities exist in the region and for the city of L'Aquila to leverage its natural assets – from its beautiful landscape to renewable energy sources (biomass, wind, solar) – in support of sustainable development. As other regions in Italy, Europe and the World seek strategies to develop and deploy new technologies, evolve their institutions to provide incentives for sustainable development, and transform their economies and societies, the region – since it needs to rebuild and redefine itself anyway – can leapfrog this process and become a showcase of broader importance and impact. Given that the majority of the world population now lives in cities, a particular role as a demonstration project and example may fall on L'Aquila as it embraces smart redevelopment of its infrastructure, fosters regional collaborations with research, business and environmental protection, and stimulates inclusion of people across sectors and society. The city of L'Aquila can become the engine of an integrated use of the region by which tourists can enjoy easy access to the surrounding natural beauty sites during the day and enjoy the evening easy access to the spectacular architectural and cultural heritage in the old city centre. With an adequate scheduling of events this system can be functioning all year round, thereby breaking away from the seasonality of other forms of tourism. This model can only be achieved by a higher degree of integration of the supply over space and time. Tourism operators need to plan in close collaboration with managers of hotels, park land and those in charge of guaranteeing access to cultural events.

Clarifying the cultural, heritage and artistic values to be preserved in the strategic restoration for the city of L'Aquila, and explicitly distinguish these from the changes to be implemented in L'Aquila redevelopment plan.

68. The reconstruction process is currently experiencing an impasse, at least as far as public perceptions are concerned, with as yet little or no clear consultation process regarding the vision for the future rebuilding of the city.

69. Discussions on reconstruction currently centre on the widespread assumption that all buildings must be rebuilt exactly as they were before the earthquake. However, the fact that the buildings must be able to withstand earthquakes in the future means that rebuilding by replicating exactly the earlier blueprints is not always appropriate. Debate on these issues is largely absent, while it should be articulated as soon as is realistically possible.

70. The reconstruction agenda is currently dominated by technical issues. Although the post-disaster reconstruction situation is fraught with technical problems - since the earthquake's epicentre was right underneath the city of L'Aquila – it is also essential that a broader cultural, artistic and social agenda is urgently injected into redevelopment debates, in order to facilitate a wider sense of public involvement in the reconstruction process. This is also imperative in order to ensure that the city centre real estate markets are once again able to become viable, as an asset base for spurring future development. However, as the historical centre reconstruction will take time, it is critical to quickly plan and create public spaces and services (cultural, for amenities, services for households) in the hinterlands of the city.

71. Since almost three years have already passed since the earthquake, it is also necessary to develop as soon as possible a clear timetable, concrete plan and measurable outcomes regarding the actual reconstruction process. The whole city cannot be rebuilt at once and the logic underpinning the process of reconstruction prioritisation must be made explicit. Such a reconstruction process offers a unique opportunity to balance identity and innovation by developing a sustainable city (new smart forms of energy provision and heat management systems, modern sustainable infrastructure etc.).