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Mieres (Asturias) as a geographical laboratory to guide urban transition in mining cities

I. THE TERRITORIAL IDENTITY OF MIERES. A CITY IN TRANSITION THAT SEEKS TO REORGANIZE ITSELF TO FACE THE CONTRACTION

Asturias, framed in a peripheral European Atlantic macro-region, faces a long cycle of contraction. Facing this situation becomes an arduous task and makes it necessary to integrate the interaction of the Local Corporation of Mieres with the University of Oviedo, through CeCodet, which will not be complete without the established companies and other organisations and entrepreneurs. In order to advance in the urban regeneration of Mieres this binomial is legitimised to propose a guideline of what Neumann (2000) calls “regional design”. And not only recovering its ecological quality (Ferber & Schlappa, 2016; Haase, Haase, & Rink, 2014; Hollander, Pallagst, Schwarz, & Popper, 2009), but also integrating into the vision of the territorial ecosystem new functions, in fields such as renewable energies, ecology and agriculture (Hollander et al., 2009); incorporating beauty, through landscape modelling, to places where the priority was to respond to the needs of a very demanding extractive productive system. Mieres was developed as a mining and industrial city for more than a century and a half. The challenge is to recover its quality as a medium-sized city, included in the Metropolitan Area of Asturias. In order to face its prolonged decline, in the last four decades, inertial policies of reindustrialisation have been activated, which have not been able to change the declining trajectory. A more precise definition of its

current territorial identity can be found in the syntagma Urban shrinkage, which allows Mieres to be used as a perfect laboratory in which actions against the virus that causes decline can be tested. The need is to regenerate its habitat, through actions integrated in a strategic approach. M-Movibus is the acronym of Mieres, Integrated Mobility and Sustainable Urban Development. Master Plan that continues the Sustainable and Integrated Urban Development Strategy of Mieres (EDUSI-Mieres), of 2016, where a series of actions were proposed for the remodelling of significant urban pieces such as the park plaza de la Mayacina (Biot et al., 2016).

II. INDICATORS OF SHRINKAGE AND THE GEOGRAPHICAL PROFILE OF MIERES

An updated view of the set of demographic, social and economic indicators certifies the prolongation and intensity of Mieres decline since 1960 (Rodríguez and Menéndez, 2019). This is what we call social devitalisation. If we take into account, as a valuable indicator of synthesis, the demographic evolution, the municipality of Mieres has, in 2020, 37,537 residents, a figure close to the one recorded a century ago, and 33,555 less than in the 1960 census, when the largest population was registered (71,092 inhabitants). Fundamental factors of the demographic decline are the very low birth rate and the very strong ageing of the resident population. Only the attraction of the external population will be able to change the rhythm or direction of the trend.

The weight of employed workers is low, and the same happens with the activity rate. Unemployment stands at 21.5%, well above the average for Asturias (14.4%). On the other hand, physical decapitalisation is reflected in the existence of numerous degraded enclaves, inhabited by an ageing population and reoccupied by some people at risk of exclusion. However, the council of Mieres has appreciable levels of public facilities and services. The educational demand is covered and it has a campus of the University of Oviedo. In the health sector, it has a newly built hospital, as well as health and care centres for the elderly. In conclusion, Mieres is characterised by an important investment, in the last decades, in public services and municipal facilities. But “social devitalisation is reinforced by the redistributive nature of income, determined by a contribution of the productive component 25% lower than the redistributive one, which increases the dependent nature of the population, impoverishing the local social capital, with an inversion of the evolutionary curves of employed and pensioners.

From a geographical point of view, the council is divided into three units: the urban settlement of the main plain and its immediate transversal valleys, the periurban settlement and the rural settlement. The main valley, crossed by the Caudal River, is configured as the central transmission tree, with urban characteristics and with different sectors, depending on the dominant occupation, residential or industrial, although the uses and the impact of the large communication infrastructures are usually intermingled. The urban axis is divided into a main axis, on the Caudal valley, and transversal axes, on the valleys of its tributaries. The main urban axis hosts most of the population and activity. It has a dominant residential part, clearly delimited to the north by the Batán coal washery and the junction of the AS-1 and A-66, up to the Figaredo-Ujo-Santa Cruz junction in the south, where the lateral valleys and the linear settlements of the neighbouring councils meet. The urban axis of industrial dominance occupies the northern end of the council, from Loredó to Batán.

The transversal valleys include the urban areas embedded in the valleys opened by the rivers that flow into the Caudal River. From south to north, we find the valleys of the Aller, Turón and San Juan rivers. The Turón valley extends 11 km to the west, from the town of Figaredo, through the parish of Turón (3,446 inhabitants). The valley of the San Juan River includes the parish of Mieres-extrarradio (1,263 inhabitants), up to the mining housing development of Rioturbio (966 inhabitants), belonging to the parish of Santa Rosa (1,423 inhabitants).

The periurban settlement is a fringe that surrounds, extending along the lower slope, the urban axis. Only a few population centres of this unit exceed one hundred or fifty residents, being affected by a strong regression. It is a settlement linked to the historical mining on the hillside and to the needs of workers' accommodation during the periods of greatest activity.

III. STRATEGIC FOCUS ON THE CRITICAL PIECE: THE GREAT URBAN AXIS. UNITS AND ACTION SHEETS

Mieres-Movidus proposes a gradualist application of the strategy, concentrating the action in the really potentially urban area, where it is necessary and possible to raise the action in the short-medium term. Strategically, the attention is focused on the great north-south urban axis, in which we distinguish an industrial sector (Loredó-Batán), a residential sector (Batán-Taruelo), and hybrid enclaves. The transversal linear corridors are included in this urban axis. General criteria and specific proposals for action are established on the units. Fourteen management units are determined, for which the corresponding action cards are provided: a total of 17 (Table 1).

IV. METHODOLOGY

M-Movidus, shares the EDUSI-M methodology (Rodríguez and Menéndez, 2019) regarding public participation, conceived as a piece of territorial planning. It has been drafted using the project logic, to elaborate a technical proposal, obtained both in the cabinet and fieldwork, through public participation, to which the peer review proposal or panel of experts is incorporated. The implementation of the project requires the continuity in the follow-up and monitoring of the project during its execution, as a factor of animation and correction of deviations, through the platform to be created called Territorial Observatory of Mieres. The Open Method of Coordination (OMC) is used, based on the systematic evaluation among peers, at successive levels, through a process that extends temporarily from the outlining of the action guidelines, to the establishment of the system of indicators and the definition of the competency frameworks of each actor, in order to reach a consensus on their contribution to the system and improve the possibilities of intervention. It was used by the European Social Agenda (2000), to deal

TABLE 1. *General index of management by action units, operational table and index cards*

Action units	Operational Table	Index card
0. Mieres Central. Oñón	EUPR-0-1	1. Mieres Central
1. Mieres Central. Parque-plaza	EUPR-2 (S1-S2)	2. Mayacina-Campus
2. Avda. del Camino/Aniceto Sela	EUPR-2 (S3)	3. Vega de Arriba
	EUPR-2 (S4)	4. Santuyano
	EUPR-2 (S5)	5. Figaredo N-S
	EUPR-3	6. Santa Marina
3. Santa Marina	EUPR-4	7. Ujo
4. Ujo	EUTR-5	8. Figaredo E-O
5. Figaredo O-E	EUTR-6	9. Turón
6. Turón	EUTR-7	10. Santa Cruz
7. Santa Cruz	EUTR-8	11. San Juan-Rioturbio
8. San Juan-Rioturbio	EUSEH-9	12. Movilidad externa
9. Redes de Interés General	EUSEH-10	13. Movilidad interna
10. Redes viarias locales	EUSEH-11	14. Inventario de enclaves degradados
11. Enclaves residenciales degradados	EUPI-12	15. Área logística
12. Área Logística	EUPI-13	16. Ablaña
13. Ablaña	PPR-14	17. Vías de parque
14. Poblamiento periurbano y rural		

with issues related to territorial restructuring, through strategic management projects, which require an evaluation process to detect their drift, the changes they produce in the environment and their degree of progress, by means of a battery of indicators and the involvement of the participants. The MAC monitors the objectives of the strategy to offer progress reports through the Territorial Observatory of Mieres periodically. In parallel, the peer participation forum is maintained, to use the territorial intelligence contained in the local system. The effectiveness of the participation must be professionalised and guided, in order to avoid distortion of the debate.

V. CONCLUSIONS

The situation of the city of Mieres is described as a contraction. This qualification is extended to the metropolitan area and to the Asturian region, in different scales. In order to face it and based on the experiences of the last four decades, the planning objectives proposed two decades ago are updated: connecting, activating and remodelling (CeCodet, 2002, 149-150). M-Movibus is conceived as a territorial action-research project, which can become a geographic laboratory of urban regenera-

tion, anticipating trends. To this end, it proposes to unite and assemble its component neighbourhoods, mitigating the consequences of a territorial planning that prioritised the needs of the general interest and the production of the system, thus requiring a forceful and urgent action to stabilize the city, improving its coherence, harmonizing its components, eliminating barriers, facilitating mobility, naturalizing the urban landscape and exploiting its evident capacities. It is an action plan based on a strategy of integrated remodelling projects of critical urban pieces, grouped in functional families. It is intended to order the great longitudinal urban axis and organize the transversality, to restructure the vega as a coherent and friendly city, overcoming barriers that disarticulate it. Symbolically, to recognize its operational unity, it is proposed to give it the title of the avenue and the name of Camino de Mieres. In addition, another urban centrality is promoted in the Figaredo junction, as a link between the main axis and the transversal axes of Turón and Santa Cruz, and its merger with Ujo is anticipated. The layout of Mieres to facilitate the passage of infrastructures of general interest makes it necessary to improve the landscaping of the highway junctions, the treatment of the interface space between the highway and the nearby buildings, the installation of vegetation and acoustic-visual screens and

measures to facilitate the integration of the railway network. The numerous neighbourhoods of the mining habitat need the adaptation of their facades to increase energy efficiency and break the external monotony, their landscaping treatment and that of the public spaces, which includes their landscaping. And the study of pilot replacement/relocation actions in those cases where it is difficult to adapt them to current needs or where they are seriously affected by communication systems. Knowledge of the state and location of degraded, ruined, abandoned, disused or unsuitable spaces is proposed, with the aim of avoiding situations of marginality and the generation of a hostile urban landscape. In areas of problematic urban structure, we propose the implementation of management plans to address the root of the problem. And the treatment of degraded enclaves, either through the elimination of ruins or their rehabilitation. Specific actions are also included for logistics and industrial areas, either by

diversifying their potential or by improving their accessibility and landscape. Of particular importance is the conversion of the transport centre into a logistics area, supported by its location in relation to the rail and road freight transport networks. A general mobility and accessibility circuit is consolidated for the exterior and interior of the council, taking into account the needs of pedestrians, cyclists, public transport, cars and other means of transport. Guidelines are drawn up for actions in peri-urban and rural areas, through the improvement of public spaces, the encouragement of building rehabilitation and the creation of circuits linking the network of rural centres, protected areas, park roads and axes such as the Camino de Santiago. Finally, the methodology for the elaboration of the project and the strategies for citizen participation are analysed, based on the previous experience of the EDUSI-Mieres project and the application of the Open Method of Coordination (OMC).