Multifunctional greenway approach for landscape planning and reclamation of a post-mining district: Cartagena-La Unión, SE Spain

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Fragmented structures create metaphorical wounds in the landscape altering the ecological and cultural processes associated with it, as it can be seen in many mine areas. Therefore it is advisable to organize the reclamation plan in the beginning of mine operating to provide spatial and functional integration of the landscape based on scienti[c arguments and with all possible legal and administrative means, which is generally the case of the Strategic Environmental Assessment. However, there are many abandon mine areas where no reclamation plan has been carried out, such as the case of Mining District of Sierra Minera Cartagena-La Unión, SE Spain. In these cases it is vital to respond in a sustainable manner for healing the landscape wounds of post-mining activities. Reclamation activities of a post-mining district includes not only the mine soils also all land uses around them, for this reason on necessary create practical solutions for returning the functions of ecologic and cultural processes of the area. Greenway approach shows the main veins which are crucial for keeping alive and sustaining the mentioned processes of the area. Therefore the main objectives of this study are to 1) develop an integrated local greenway network to be able to preserve significant resources and values of the district, and to 2) develop this greenway network as a part of reclamation process for degraded areas. Landscape assessments revealed the most valuable and potential connectivity resources of the area. These clustering and linear patterns of resource concentrations include mountain range and valleys, natural drainage network, legally protected areas and cultural-historical resources. Conservation areas, cultural-educational resources of post-mining activities and the riverbeds have been the main building stones for the greenway corridor. The multifunctional greenway approach serves as landscape reclamation and planning tool in a degraded area by showing the priority zones for reclamation and having the landscape planners to be more decent in these vital veins that help to return the ecological and social functions and interrelations back. Conservation and benefitting of significant resources can be provided simultaneously and this guides to land managers for making land use decisions and implementing the linkage designs. Protection of the corridors has to be provided through a combination of land acquisition, land-use regulation and policies to avoid inappropriate land use developments in the corridors.