River remediation and urban development scheme, Fez, Morocco

Project data
Type of project: Landscape design
Estimated start of construction: January 2009

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Comment of the Holcim Awards jury Africa Middle East
The preeminent feature of this project consists of the comprehensive approach to environmental revitalization and urban renewal. The Fez River, a historic lifeline traversing the medina of Fez, is now faced with a diminished role due to serious pollution and risks dried up. The future water diversion to a new sewage treatment plant allows the mostly covered river to be laid open again and thus regain its potential as a public amenity. The project proposes interventions at city-scale master plan and site-scale projects for cleaning the degraded water as well as the remediation of heavily polluted sites such as the tannery at Chouarra.

The jury commended this project because of the coupling of a comprehensive socio-cultural and economic program to an environmental remediation initiative. In particular, once implemented, the proposal has the potential to restore the vitality of the city of Fez for its residents and visitors by mitigating the two major threats now facing the river. Equally, the proposed transformation of existing nuisances through community supported programs such as a leather-craft centre, recreation facilities for children, water-cleaning wetlands, and botanical gardens is highly commended. The project promises to be a strategic environmental intervention creating a myriad of social benefits.

Project description by author
The Medina of Fez was founded in 989 AD as two separate nucleii on the banks of a river. In time, the two sides grew and fused into one. For the majority of its history, the Fez River remained the city spine and an integral urban element. Over the course of centuries, however, dependence on the river to support a growing population and a flourishing leather-tanning industry severely impacted water quality. By the 1970s the river had degenerated into the sewage channel named “River of Trash” and half of its course through the medina was covered by a unsightly circular access. The measure of the river was extended in 2004 and completed in 2007 despite Fez’s designation as a UNESCO World Heritage site.

The city’s Department of Water and Power is currently implementing a new system that will channel sewage towards two treatment plants. Soon, the “River of Trash” will cease to receive water discharged after only primary sewage treatment and regain its potential as a public amenity. If rehomed, this river will no longer be salient to the unique urban context of Fez. Indeed, the infra-mural population of the medina not only lacks public open spaces, but is also exposed to a rapid deterioration of its environment due to over-density and aging public infrastructure.

In support of its current initiative, the Department of Water and Power commissioned us to propose a rehabilitation plan for the river as well as interventions along its banks. Our proposal is a strategic plan that addresses the ecology of the river and the social and economic concerns of the city. It works at two scales: city and site. Based on an in-depth analysis of the urban and ecological context of Fez, the project at the city scale is a master plan with recommended measures for improving regional water quality. At site scale, the project is a set of three critical interventions strategically phased to enhance water quality, remediate contaminated sites, create open spaces, and build on existing resources for economic development.

While uncovering the northern part of the river, the three projects take advantage of vacant sites to re-establish its connection with the city fabric. The “el-Rcif” site stitches the transport hub to the city and the new cultural and social hub circulation system and allows for the cleaning of runoff water. The Andalous site offers the first children’s playground in the medina, coupled with a constructed wetland. The Chouarra tanneries site offers a botanical garden and a new center for design and leather work.

The overall effect creates a project that elevates rivers as a form of urban infrastructure that possesses the potential to stitch a blend of disjuncture between the needs of a 21st century population and the historic imperatives necessary to preserve the integrity of a UNESCO World Heritage designation.

Relevance to target issues by author
Quantum change and transferability
By approaching issues from a multi-performative perspective, our project embodies a powerful methodology relevant to developing countries where resources are scarce and the demands for basic needs are immediate. The project’s approach is especially appropriate to countries in the Maghreb and Middle East where medina quarters are a common urban typology currently facing an acute crisis.

The lack of open public spaces and the dearth of infrastructures adapted to contemporary needs affect the residents’ quality of life and open the medina to speculation, deterioration, or museification. Our project demonstrates that careful interventions could help the medina evolve to meet its dwellers’ needs while preserving its urban integrity.

Ethical standards and social equity
Our project aims to enhance the social, economic, and physical well-being of locals through the provision of new public spaces, strategies for economic development, and health and safety advances by the treatment of contaminated water and soil. While contaminated sites in less affluent areas are disregarded, our project addresses polluted sites in the poorest areas of the city.

Ecological quality and energy conservation
The project embraces a number of measures to improve water quality and consequently enhances wildlife habitats. Our introduction of constructed wetlands manages excess flood water, cleanses storm water and promotes groundwater recharge and habitat creation. Our third site intervention converts soon to be vacated tanneries, which are heavily contaminated with chromium, into a public botanical garden.

Economic performance and compatibility
Thanks to collaboration with foreign and local economists our project proposes new strategies for the local leather industry to align with international standards. As polluting tanners are moved to a new industrial area their tanneries are converted to design-co-operatives for high-value artisanal goods. The new designs replace the current mass produced items bringing wealth to local communities.

Contextual and aesthetic impact
The project will rehabilitate a historical river with heavily compromised integrity by a succession of coverings and sewage dumping. The project will uncover the northern part of the river which is now an unused concrete refuse wasteland. The restoration of high water quality will help to restore the river as an integral part of the city’s urban fabric and as an active public axis.