



## **PAKISTAN: LAI NULLAH BASIN FLOOD PROBLEM ISLAMABAD – RAWALPINDI CITIES <sup>1</sup>**

- 1. Location of the study:** Pakistan
- 2. Author(s):** Ahmed Kamal<sup>2</sup>
- 3. Brief description of flood management practice**

The Lai Nullah Basin is located in the northern part of Pakistan, with a catchment area of 239.8 Km<sup>2</sup>. It has a length of about 30 Km, stretching from the upper reaches which comprise the Federal Capital City Islamabad, at its north-western edge, to the lower reaches which hold the Rawalpindi District, Punjab Province, in its south-eastern edge.

In the Lai Nullah area a total of 19 floods occurred during the 59-year period from 1944 to 2002; thus, on average there were flood damages almost once every three years in the twin cities of Islamabad and Rawalpindi. An extreme flood occurred in 2001, having been the largest among the recorded events (considered as a national disaster). Besides a total of 74 human lives lost, estimates indicate a damage/loss of more than USD 0.25 billion to infrastructure, Government and private property.

A number of strategies have been considered for the city of Rawalpindi after the flood of 2001, comprising structural as well as non-structural measures. However, the envisaged improvements need to be integrated with measures for Islamabad; in this context, the implementation of two urgent projects has also been suggested. Furthermore, there is need for an effective forecasting and warning system for the basin.

Disaster management in Pakistan basically evolves around flood disasters, with a primary focus on rescue and relief. The existing institutional structures responsible for disaster management are geared to reactive short-term responses. There exists legislation and a variety of governmental and NGOs that address some critical aspects of preparedness, mitigation, early warning and response to natural and human induced disasters.

As regards flood preparedness and response, presently both at the federal as well as at provincial level effective planning and practical arrangements are ensured every year, and in this context all resources are mobilized to create a sense of response among the affected people towards government efforts.

A draft of the National Water Policy has been issued in January 2002 and is due to be finalized soon through its approval by the Government for adoption. Amongst others, it clearly states the involvement of all the public as well as private stakeholders in water sector issues and encouraging stakeholders to contribute towards policy formulation. In the Third NFPP (1998-2012), the concept of community participation in all aspects of flood control is also clearly spelt out.

### **4. Key issues**

The study shows clearly the applicability of an IFM approach both at the national, as well as provincial and city levels. The establishment of the FFC has resulted in planning and implementation of the NFPP based on integrated water resources management. Assigning the role of coordinating

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<sup>1</sup> This case study provides complementary information to the one contained in the Chenab River of Pakistan, submitted separately

<sup>2</sup> Federal Flood Commission, Government of Pakistan



agency to FFC in the Lai Nullah area has resulted in pooling of all the resources/strategies for attaining IFM at sub-national/city level.

## **5. Relevance to the concept of IFM**

The study covers the following aspects of IFM to varying extents:

### ***Integration of land and water management***

Aspect 2 - Land and water management

Aspect 3 - Laws and regulations for flood and water management

### ***Best mix of strategies***

Aspect 10 - Best mix of structural and non-structural measures

### ***Participatory approach***

Aspect 7 - Community-based approach

Aspect 9 – Effective linkage between existing institutions

### ***Integrated hazards impact mitigation***

Early warnings and forecasts

Aspect 11 - Free and open exchange of data

## **6. Comments**

### **(i) Potential strong points of the case study**

- Measures proposed for flood protection and mitigation
- Description of the role of the various agencies involved in flood management
- Emerging concept of stakeholder participation

### **(ii) Potential for practices mentioned to be transferred/applied to other regions with geophysical and socio-economic characteristics)**

The case study includes a long list of lessons learned, both at country as well as at the Lai Nullah basin level, which are geared to fully adopt the new concept of an IFM approach.