

## Spate Irrigation

In Spate irrigation systems, short duration floods from mountain catchments of arid and semi-arid regions are diverted from normally non-perennial rivers, providing water for multiple uses (agriculture, rangelands, forestry, water ponds for domestic and stockwater use and groundwater recharge).

The area under Spate irrigation (called rodh kohi in NWFP and Punjab, sailaba in Balochistan and nai in Sindh) in Pakistan is very substantial and by most reliable estimate it is 1.4 mha – or equivalent to 7% of the total irrigated area in Pakistan. Important to note is that Spate irrigation area is not listed under irrigated area of Pakistan. It covers the major portions of the cultivable lands in the districts of D.I. Khan, Tank, Kohat, Laki Marwat, Bannu (NWFP), DG Khan, Rajanpur, Mianwali (Punjab), Kacchi, Sibi, Jal Magsi, Qila Saifullah, Lorelai, Musakhel, Barkhan, Las Bela (Balochistan), Dadu, Larkana, Jamshoro, Karachi and Thatta (Sindh). Globally the largest area under spate irrigation is in Pakistan.

This 1.4 mha is also the area where there is widespread poverty, probably more than any other single area in Pakistan. This is related to the uncertainty that is inherent to Spate irrigation in

Pakistan, the absence of reliable drinking water supply and the marginal location of Spate areas in all the four provinces. Periods of drought are part of life, as they cause hardship and sometimes even the temporary abandonment of command areas.

There are however considerable opportunities to revive/improve the productivity of the Spate irrigated areas. Crop yields of the main Spate irrigated crops in Pakistan (sorghum, millets, wheat, pulses, oilseeds, etc.) are very low compared to international figures, whereas improved grain storage can reduce losses that are now at 6-20%. The Spate irrigation areas are next to the canal irrigated areas in terms of potential. The Spate areas are among the best-suited areas for the cultivation of oilseeds. In addition there are a number of promising crops that can be developed further, such as guar and sesame and promising minor crops – from area-specific vegetables and medicinal plants to truffle mushrooms. In addition, there is potential for arid horticulture including almonds, pistachio, mulberry, fig, pomegranate, etc.

Further, there is scope to improve fuelwood and forage production – either along river banks or in special fenced fields in the outwash areas – and to make more of the special livestock breeds including small ruminants and camels in the spate irrigated area.

## The Spate Irrigation Network

The Spate Irrigation Network (look at [www.spate-irrigation.org](http://www.spate-irrigation.org)) brings together the current knowledge and experiences in the Spate irrigation all over the world, connects the different organizations working in Spate irrigation and promote and lobbies for adequate and appropriate attention to the Spate irrigated livelihoods.



Harvesting Sesame, place



Water inlet, place

Its activities are:

- Advocacy and promotion of adequate support activities and policies
- Exchange information on the improvement of livelihoods in Spate irrigated areas through a wide range of interventions: improved water management, local engineering, livestock/ domestic water supply, crop management, livestock and forestry and others.
- Initiate activities and initiatives to support the development of Spate irrigation areas and build a wider knowledge base.
- Support the implementation and start-up of projects in Spate irrigation – linking Spate irrigation to imminent sources of funding, including climate change adaptation.

The Spate Irrigation Network is in existence since 2002 and has 280 members. It operates [www.spate-irrigation.org](http://www.spate-irrigation.org), is about to finalize with FAO Spate Irrigation Guidelines, is running courses on the topic and supports the implementation of spate projects. Currently the international network is hosted by MetaMeta (the Netherlands).

In 2010 the Spate Irrigation Network will set up a Pakistan chapter. The chapter will support the development and implementation of good practices,

assist the implementation of spate projects, develop training curricula and influence politics.

The Pakistan Chapter will be hosted by the Pakistan Agricultural Research Council with support of SPO.

Convenors of the Pakistan Chapter of Spate Irrigation Network are:

- PARC: Dr Shahid Ahmed
- SPO: Karim Nawaz
- International Spate Irrigation Network (see contact details for more info)

If you or your organization would like to be engaged in the activities of the Pakistan Spate Irrigation Network, please contact one of the convenors.

Also contact one of the convenors, if you would like to register as a member.



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Spate Irrigation Pakistan