

Floods 2010 in Pakistan

Main findings after SDC/HA drinking water rehabilitation programme

H Info - Berne - 23.02.15

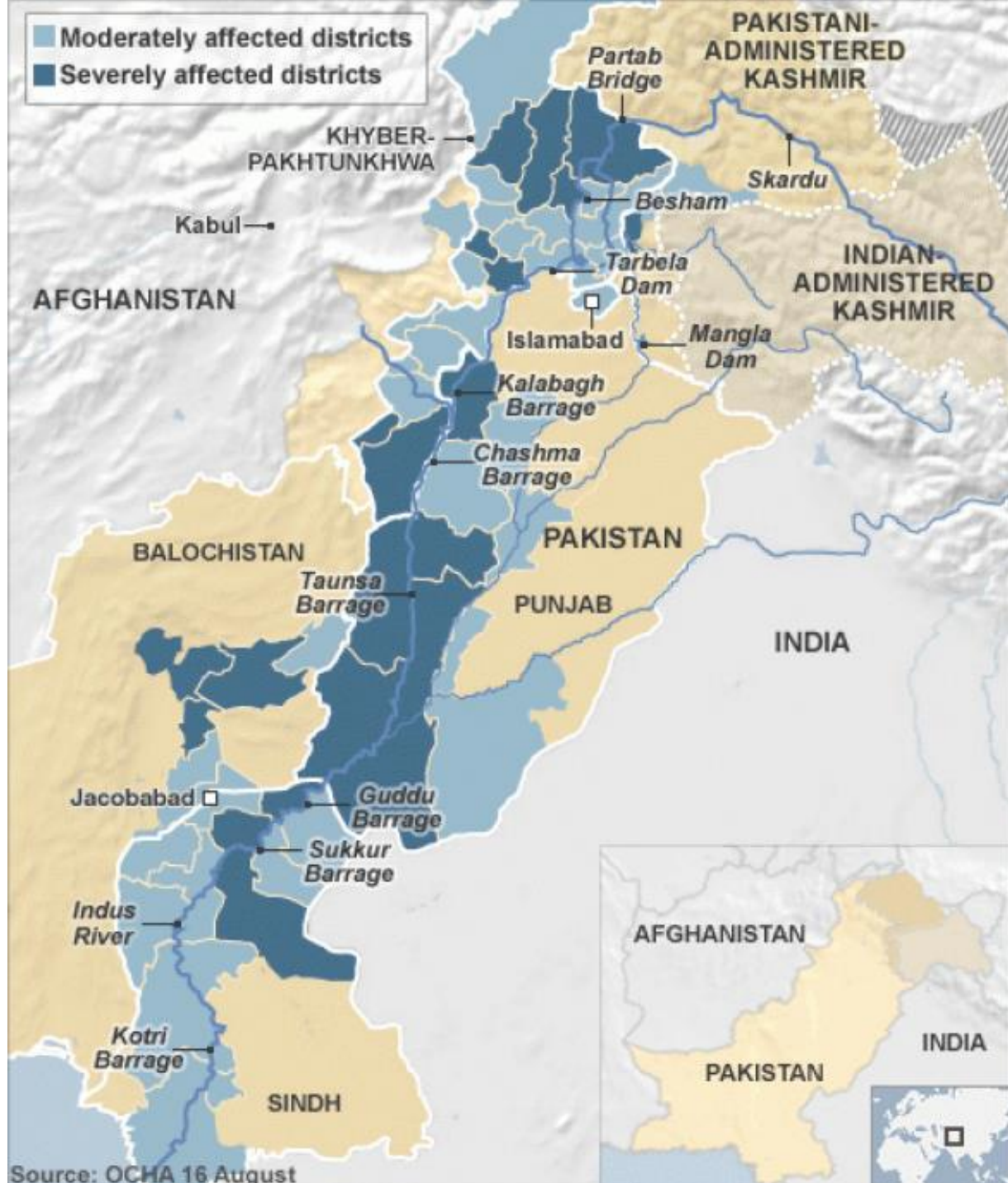
Patrick Kilchenmann

Main points

- * Background information – Floods 2010
- * Activities implemented by SDC/HA
- * Scientific study
- * Results of water quality analysis
- * Conclusions and key messages

Background information

- * Extreme rainfall in July 2010 – 4 times normal monthly rainfall in 3 days
- * 2'000 people killed
- * 21 M people affected – more than tsunami + Haiti EQ + Pakistan EQ
- * 12 M people displaced
- * 2 M houses damaged
- * 10'000 schools destroyed













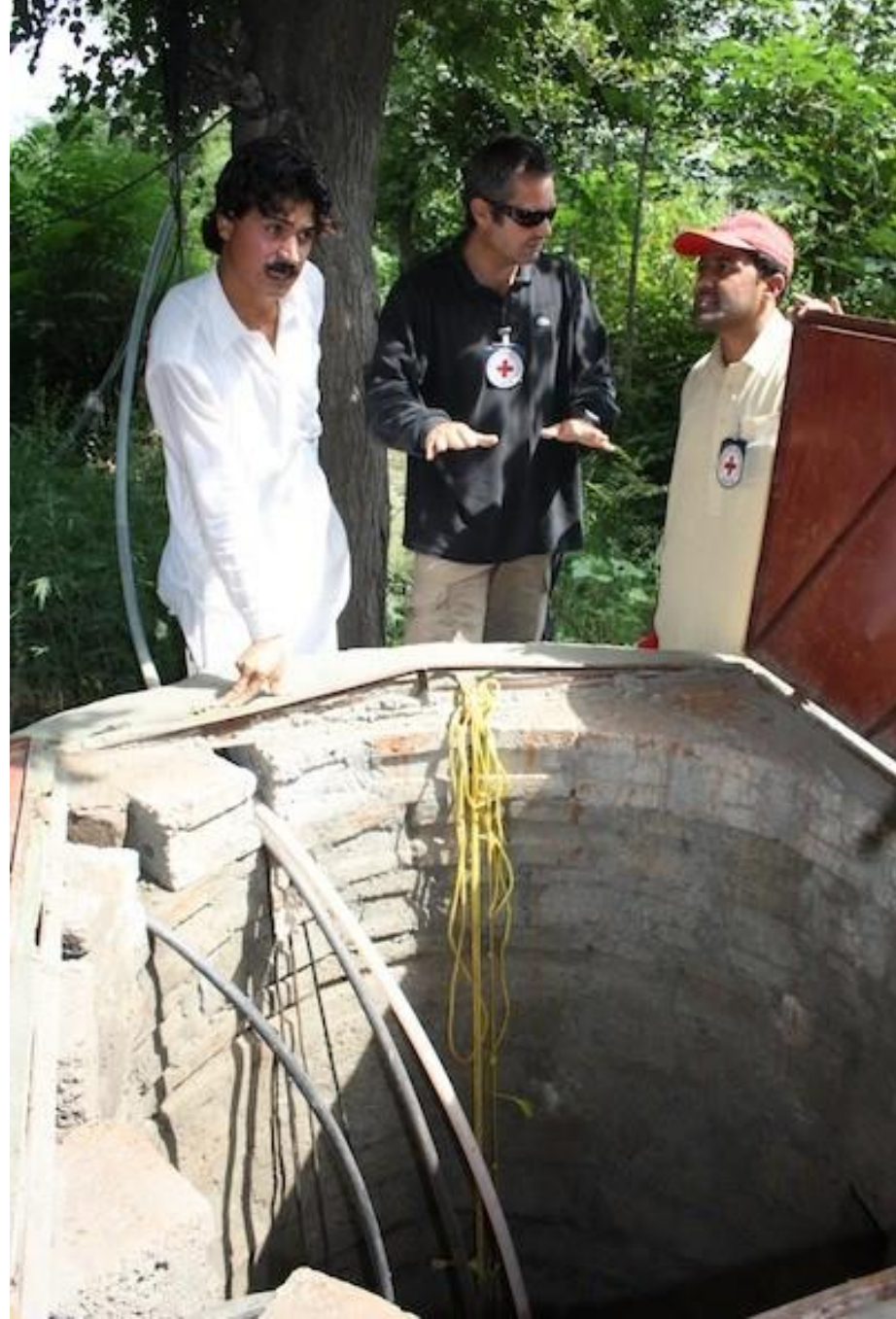












WES/HA programme

- * **Well Rehabilitation**
- * WASH in schools and hospitals
- * WASH in refugee camps
- * Rehabilitation of rural water supply systems
- * Other WASH actions

Well rehabilitation



Disinfection



Hygiene promotion

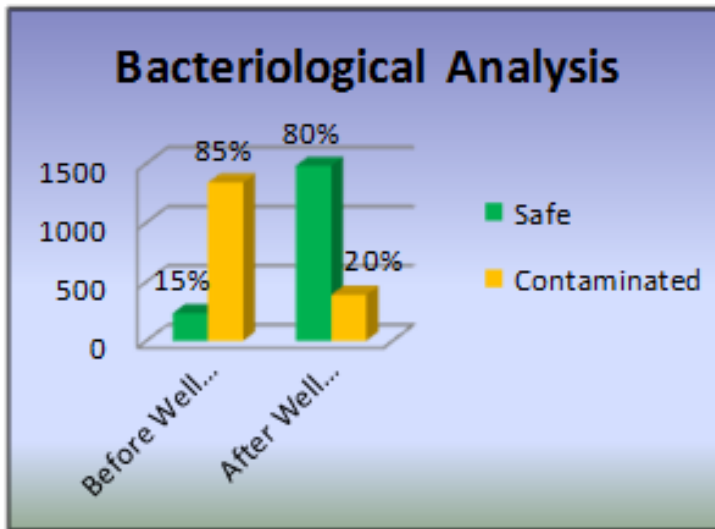


Activity	District	Beneficiaries
6'500 wells rehabilitated , including shock chlorination, hygiene promotion trainings, latrine repairs, household water treatment (SODIS), ...	Charsadda Nowshera	100'000
WASH activities in 73 schools and health centres , including training in O&M	Charsadda Swat Chitral	16'000
WASH activities in 6 refugee camps (hand pumps, water quality, drainages, latrines, hygiene promotion)	Peshawar Charsadda Kohat Mardan	26'000
Rehabilitation of 12 gravity water supply systems	Swat	16'000
Other WASH actions (reward for sanitation, WATA kits, water in 5 hospitals, contingency planning, slow sand filtration, summer packages for IDPs, ...)	Sanghar Thatta Rajanpur Shaheed Benazir Abad Hangu Peshawar	35'000
Total		193'000

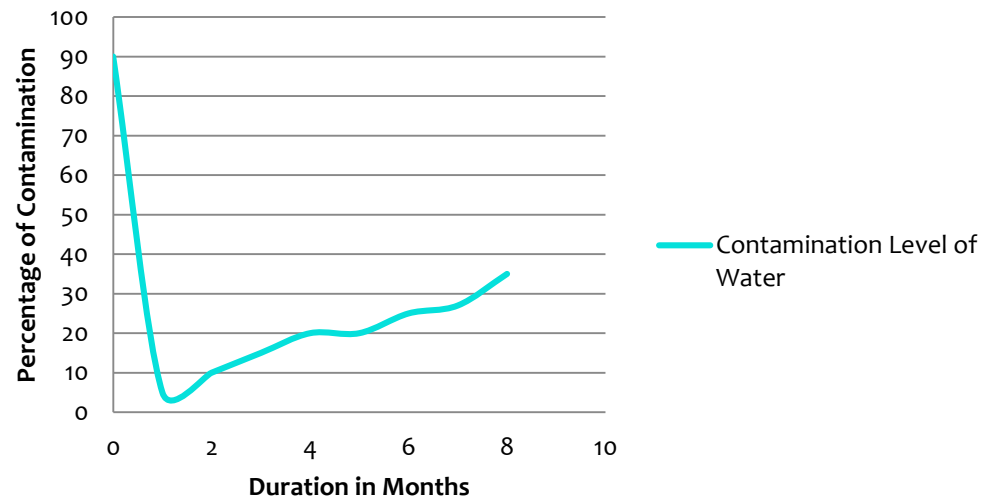
Scientific study

- * Findings of review mission 2013
- * Water quality after programme implementation
- * Identification of possible sources of contamination
- * Call for tender
- * Mission by SUPSI and Univ of Peshawar in 2014
- * Bacteriological and physico-chemical analysis of water
- * Main paths of shallow wells pollution identified

Water quality over time

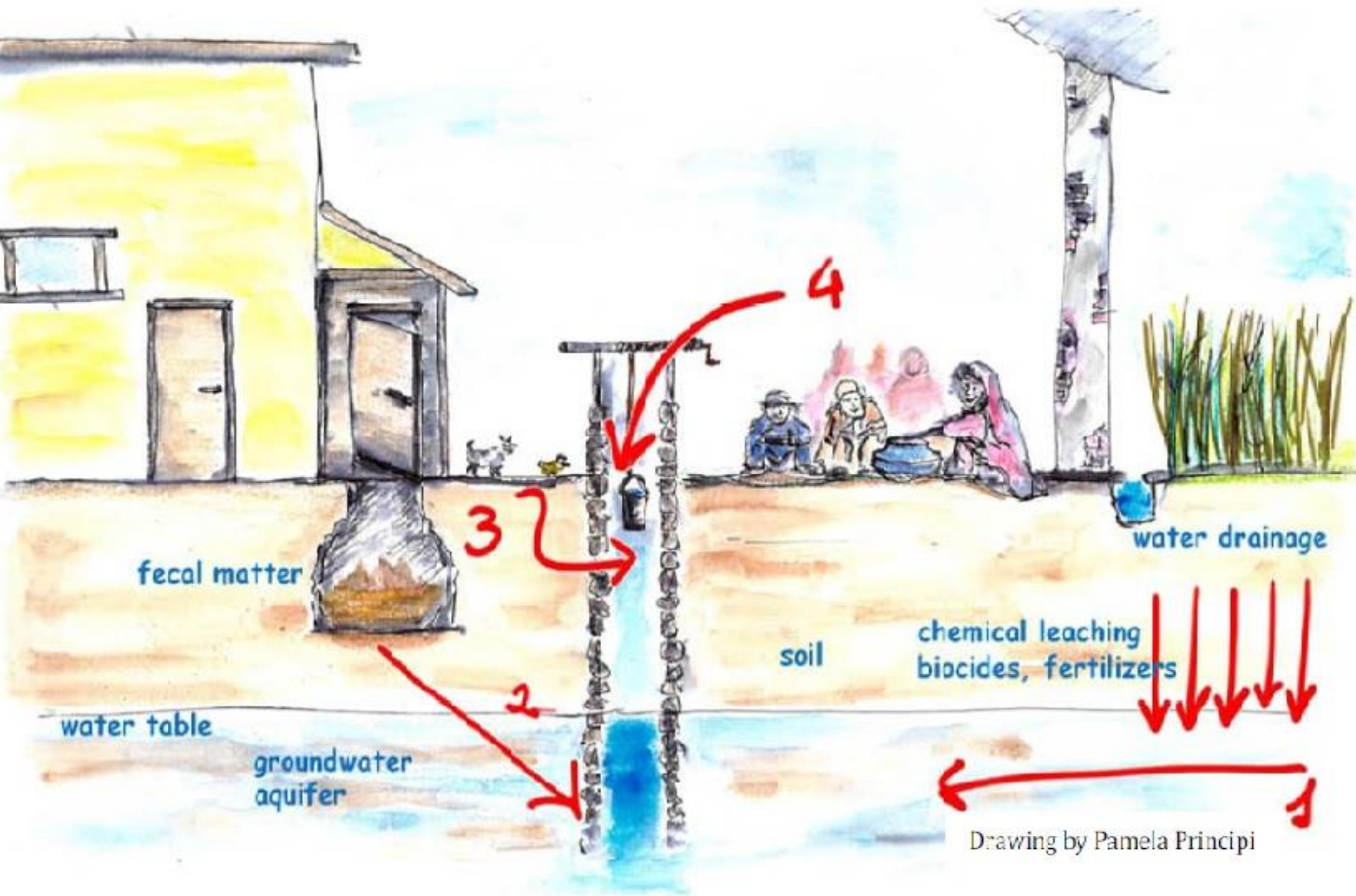


Contamination Level of Water in Different Stages in Year 2013



Main findings from study

- * Temporary improvement of the water quality
- * 62% of wells bacteriologically contaminated 3 years after the rehabilitation programme
- * Human practice is the main source of pollution
- * Direct contamination by latrine or surface runoff less important than expected
- * Water quality far better in protected well + handpumps
- * Wide spread chemical pollution identified (insecticide)



Drawing by Pamela Principi

Conclusions

- * Comprehensive project, innovative HP approach and campaigns
- * Hardware component exceeding by far initial target (6'509 vs 4'500)
- * 100'000 beneficiaries
- * Confirmed overall reduction of waterborne diseases
- * **Many lessons drawn:** Proper explanation before intervention; Use of dedicated international days; Children are very efficient ambassadors for change;

Key messages

- * More efforts in hygiene promotion necessary
 - * Behaviour change is a very lengthy process
 - * Local authorities, schools, lessons learnt...
 - * Handing over to RC ?
- * Promote protected wells with handpumps
- * Confirm chemical pollution with certified lab
- * Inform authorities !

Thank you !

Questions ?

