

## 9. DISCUSSION

*We were kings and they made us slaves, we were the sun's sons and they gave us tinplate medals, we were poets and they compelled us to pray mean prayers, we were happy and they civilised us. Who will refresh the tribe's memory? Who will get back our gods? Dear unchangeable soul that these savage hopes are yours forever.*

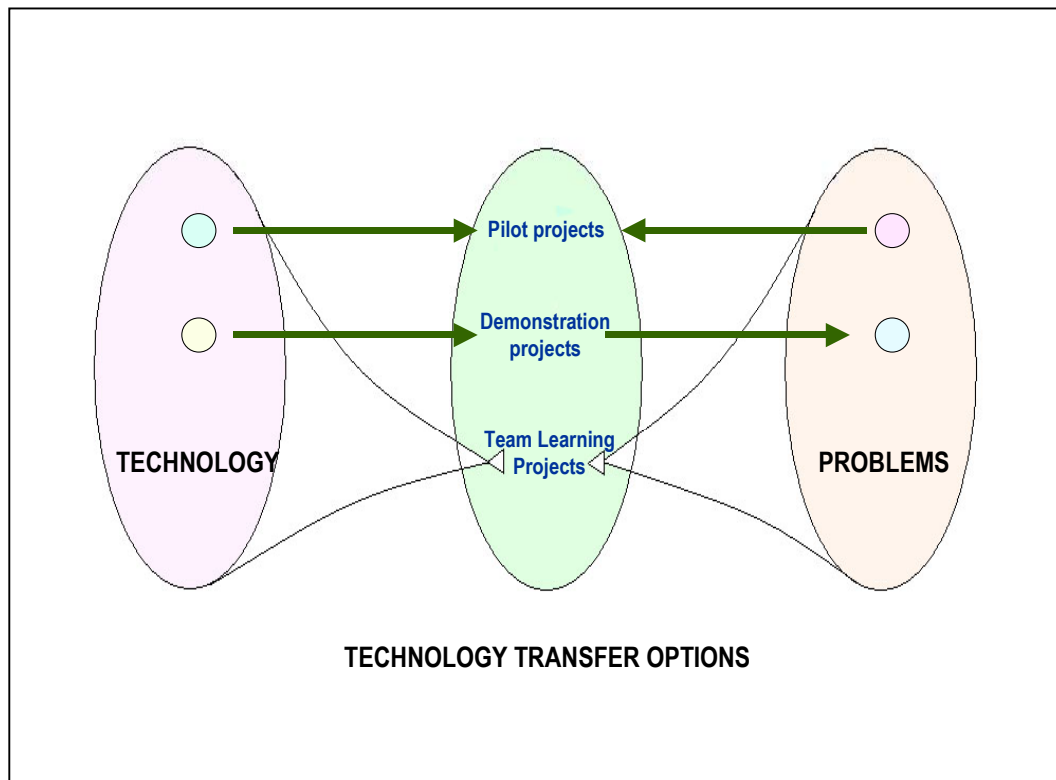
*Gonzalo Arango (Colombian poet)*

The TRANSCOL project revealed evidence of the weaknesses in the common practices of technology transfer used in the WSS sector in Colombia. The TLPs developed in Cali took advantage of those weaknesses to provide an opportunity to develop new models and strategies for technology transfer in the WSS sector. The Programme for Sustainability of the WSS Systems showed that it was possible to develop TLPs at any stage in the project cycle although more effort was required when the TLPs were carried out in the later stages of the cycle. This project also revealed evidence of weaknesses in the institutional project cycle that impede successful WSS projects in Colombia. These impediments result in a great waste of both State and community resources. The proposals made to correct the weaknesses were successfully validated in several projects carried out in different contexts. The institutionalisation of community supervision in WSS projects, particularly when the institution's practices were unethical, was identified as the main limitation to project success.

The TLP is a new technology transfer strategy. It differs from a Demonstration Project in the sense that it does not "demonstrate" anything to anyone. On the other hand, TLP is not a Pilot Project because a TLP is a full-scale project with the active participation of all stakeholders and they can encompass any technological option. In a TLP, WSS projects are analysed holistically with the aim of finding solutions that take into account the existing technological options, including the technologies already available in the community (Figure 41). Also, a TLP takes into account the local and regional social, economic and environmental conditions. The TLP links research and development at all levels and involves research institutions related to WSS projects in order to strengthen their capacities. This makes it possible for institutions to draw on the experience gained during the other developments to answer new questions that emerge. Because the technology is transferred both to communities and –more importantly to institutions that carry out the regular WSS projects

within a country- the findings and lessons learnt in the TLP can be applied in several contexts. For this reason, learning strategies are essential in any TLP (Bransford *et al.*, 2000).

The TLPs put in practice the negotiated development in an arena of consensus (See item 3.3), which only can be applied in a democratic society open to civil society participation. In contrast, concepts such as 'empowerment', usually has implies a confrontation between society and State; 'community development' implies the formulation of projects by the State with little involvement of the community; and 'community management' implies that local responsibility for solving the problems is given over to the community without any help from the State (Abbott, 1996).



**Figure 41** TLPs analyse the WSS problems holistically and look for solutions amongst the existing technological options

TLPs recognise that sustainability is a continuous process and the necessary actions to maintain and improve the sustainability indicators must be agreed by both the institutions and the communities. The institutional project cycle must be analysed and adapted to incorporate the elements that ensure the project will be sustainable. The successful operation of the TLP itself is only part of the aim. The final objective of TLPs is to develop better WSS projects at the local level.

In terms of the *Knowledge dialogue* technology transfer model, there are limitations that have to be taken into account. For example:

- ☛ Although research and development institutions may exist in a region, they are not necessarily interested in WSS problems,
- ☛ TLPs are developed in enabling environments, which need political support to be created,
- ☛ The TLP should strengthen the human capacities based on the human needs as defined by Max Neef *et al.* (1986),
- ☛ The process of carrying out a TLP is the key to increasing the sense of ownership amongst the participants in a TLP. Learning strategies are important element in this process, but they must be supported by a conceptual framework that outlines the development goals,
- ☛ The most difficult step is incorporating the findings and lessons learnt ('institutionalisation process') during the TLP into regular practice of the institutions, and
- ☛ The experiences in Cali and Nicaragua demonstrate how involving planning departments and institutions from several sectors in TLPs can help to incorporate the lessons learnt into institutional practices.