



Experience by IRPAA (Regional Institute of Appropriate Small-scale Agriculture) in North-eastern (semi-arid) Brazil

The region of Semi-Arid Brazil (SAB) is characterized not so much by low amounts of rainfall, but by its irregular distribution. The native plants and animals of Caatinga (tropical dry forest) are perfectly adapted to the climate. People and especially the government, who are regularly struck by droughts due to lack of water management and inappropriate farming and livelihood strategies, could learn from nature to live in this region

The **solution** was integrated water management with diversified water sources for a livelihood in harmony WITH semi-arid climate

IMPACT

- Secure access to clean water, water for agriculture as well as for emergency situations contributing to health, food security, poverty alleviation and resilience also in drought years
- No records of starvation deaths, major migrations, or emergencies during the last drought (2012-17)

Experience description

In 30 years of research, experience and collaboration between IRPAA, other NGOs as well as governmental institutions promoting the “living in harmony with the Semi-arid Climate” model led to the development of the successful **5 steps approach for long-term integrated (rain)water management:**

1) Drinking water, 2) water for communities, 3) water for agriculture/livestock, 4) water for emergency situations and 5) water for the environment. For each step, rainwater management technologies have been promoted, e.g. cisterns for drinking water and agriculture, ponds, sub-surface dams and shallow wells. Further, reuse of water, protection of springs and Caatinga vegetation were promoted, communities sensitized and cooperation with government to scale the experience initiated.



Other characteristics



FURTHER IMPACT

- Elaboration of decentralized and participative Water Plans in the municipalities of SAB
- Finishing the 1 million cisterns program financed by the government.
- Scale up rainwater use for agriculture, reuse of wastewater
- General recognition of the five-step approach



CHALLENGES

- Change of government and its priorities and hence the return of state-driven policies with large-scale river diversion, irrigation and mining projects.
- Narrow focus on emergency relief
- Persisting need for land reform according to climate characteristics



LESSONS LEARNED

- Rainwater harvesting and storage is indispensable, but alone it is not enough to solve the problems of droughts and climate change. It must be included in a broader livelihood strategy adapted to the semi-arid climate.
- Governmental financial support is essential for scaling up.