Shifting from assistance to development

IRC

There is another rural water supply model

The traditional model

- Water point sources, community management, “unpaid” work, weak institutional support supplemented by I-NGOs, no water quality testing, 15 to 20% non functionality (at best)
- Heavily aid-funded

Financing	**Expenditure**	
	Hand Pump	**Small network**
Transfer	Capital Support	Capital Support
Transfer & Tax	Capital Maintenance	Capital Maintenance
Tariff	O&M	O&M

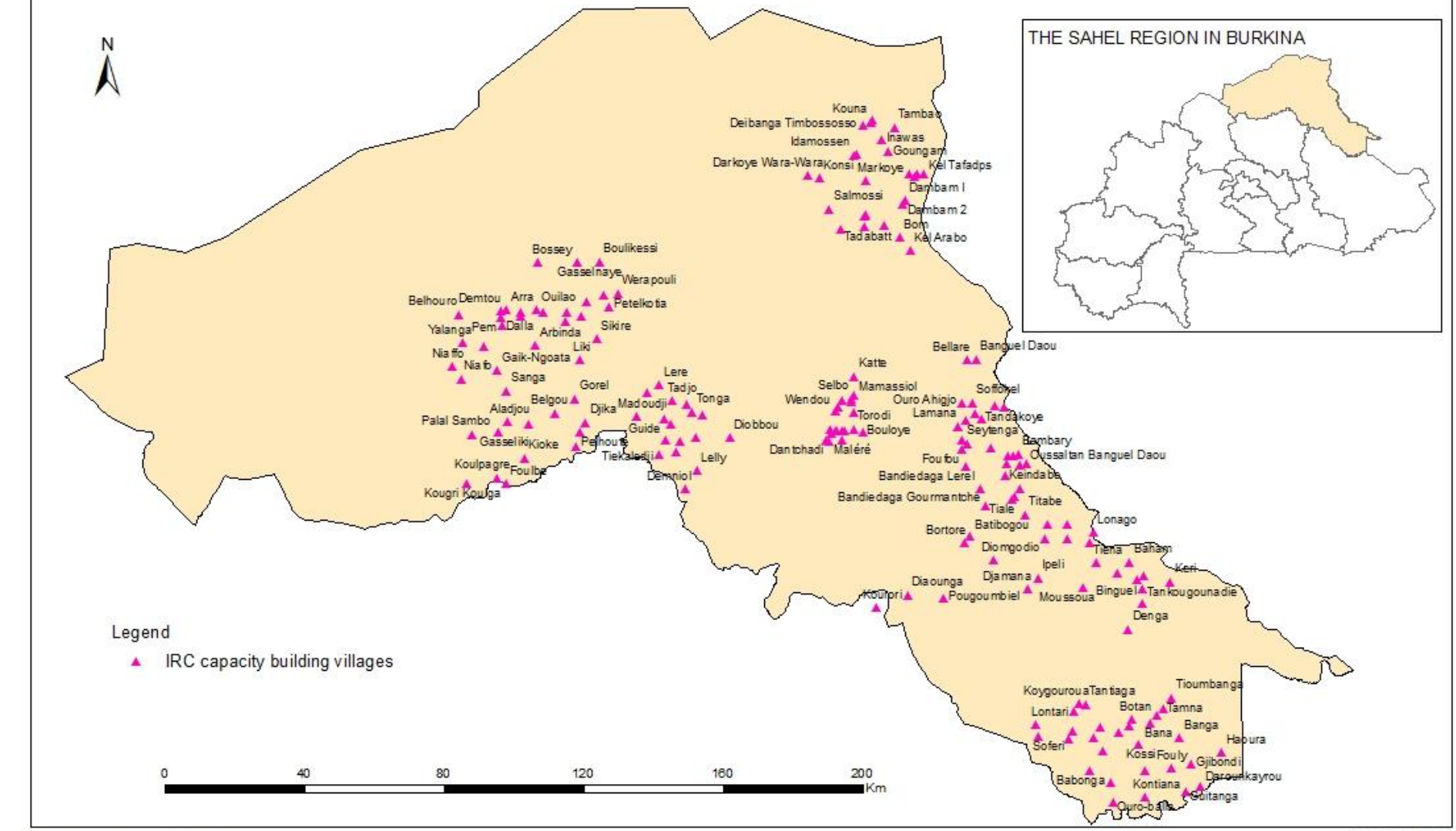
Size of “villages”	**# areas**		**Population (million)**	
	1985	*2006*	*1985*	*2006*
Bellow 2,000 p.	6449	6890	4.3	5.7
2,000 to 10,000 p.	797	1788	3.7	8.3

The other model

- Small network supplying stand-pipes & HH on premises, professional operator, neither institutional nor non-governmental support, poor regulation,
- User’s contribution 10 times higher for a consumption of 15 l /d

IRC

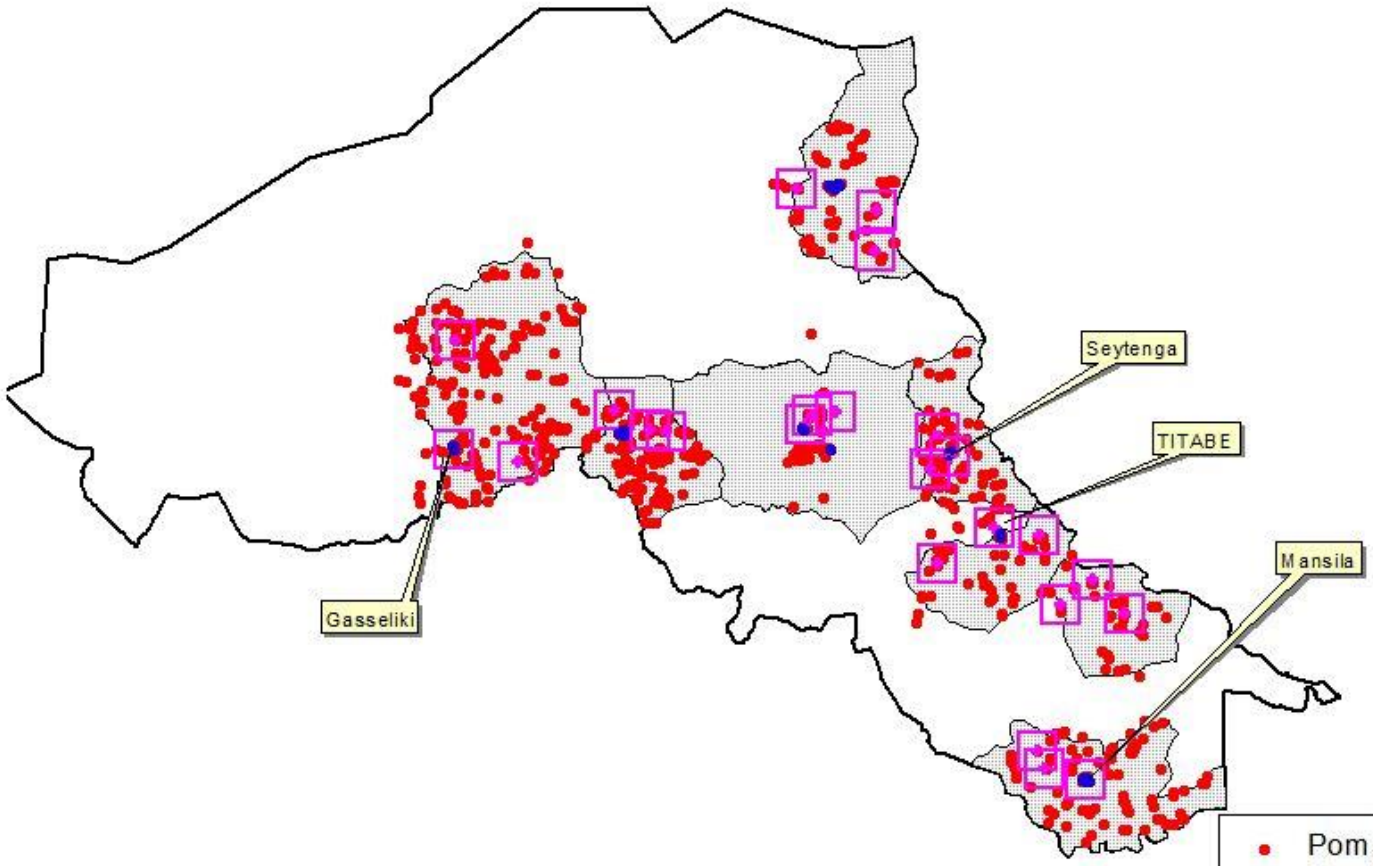
WA-WASH PARTNERS INTERVENTION VILLAGES AND ACTIVITIES IN THE SAHEL REGION OF BURKINA



Source: WA-WASH partners activities reports

Map ref. 42- 09/2013

Laboratoire Triple-S au Burkina Faso



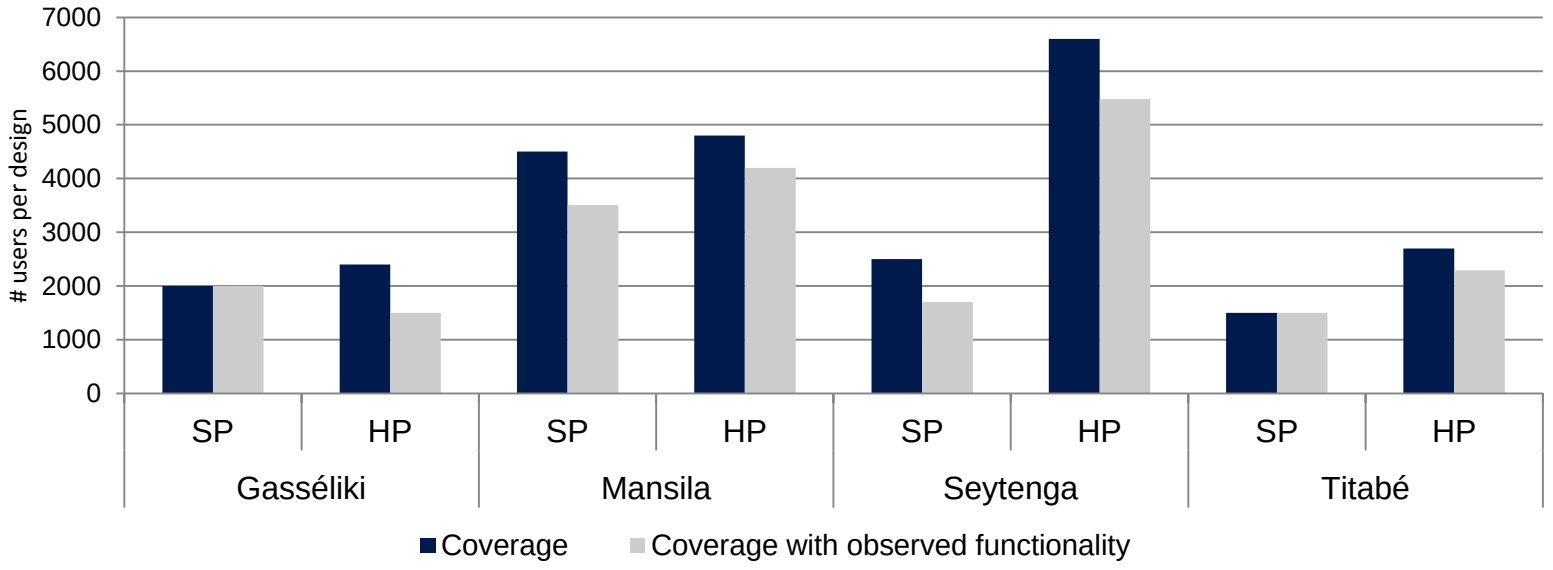
Source: IRC/Triple-S-WA-WASH

Réalisation: IRC Burkina

Février 2014

Population, coverage and functionality

	Gasséliki		Mansila		Seytenga		Titabé	
Population 2011	**4,240**		**7,404**		**4,876**		**2,581**	
Type of service	SP	HP	SP	HP	SP	HP	SP	HP
# of systems	4	8	9	16	5	22	3	9
Coverage (100% functionality)	2,000	2,400	4,500	4,800	2,500	6,600	1,500	2,700

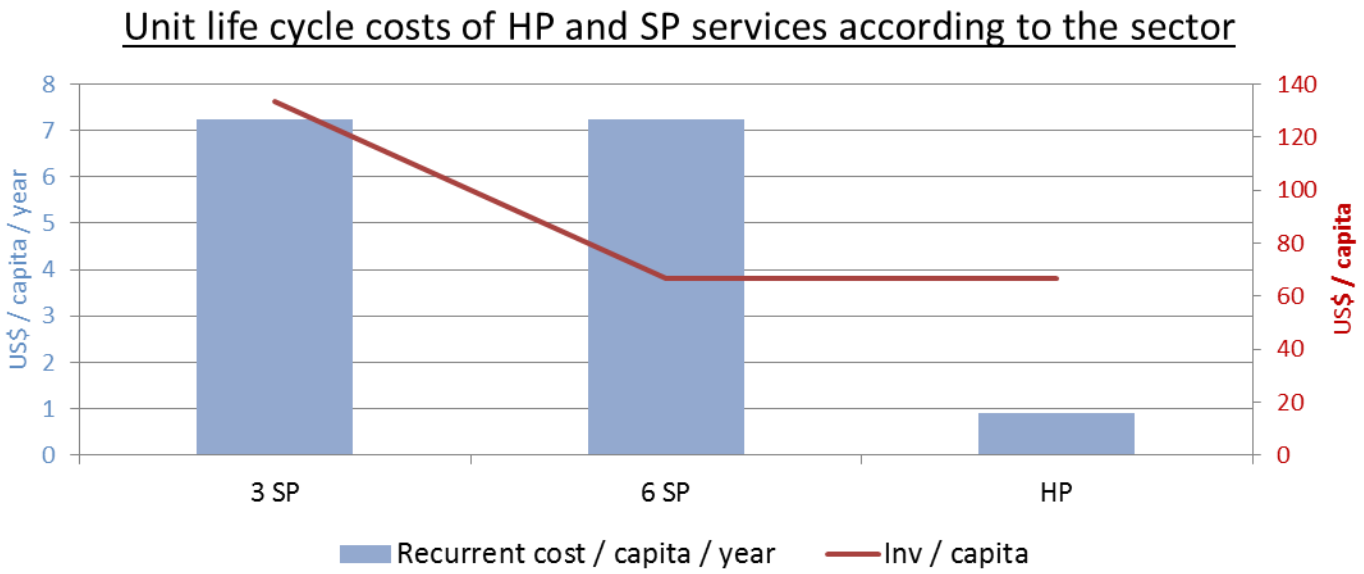


Sector standards in Burkina Faso

Higher service

	Quantity	Quality	Distance	Crowding
Access to service	> 20 l/c/d	In compliance with WHO standards	SP <= 500m HP <= 1 km	PC <= 10 c/d HP <= 300 c/d SP <= 500 c/d

Higher cost



Recurrent cost = O&M (HP) | Recurrent cost = O&M + part of capital maintenance (SP)

Support expenditures are ignored

Findings – Level of service

Piped schemes perform better than HPs on all 4 indicators

Quality

Stand pipe

The quality of the water is tested once a year and the water complies with WHO standards.

Hand Pump

Water is tested when the borehole is drilled and again 15 years later when it is rehabilitated.

None of the 55 hand pumps in the four small towns – or any of the remaining 787 hand pumps in the 8 communes – has had the water quality tested since it was installed.

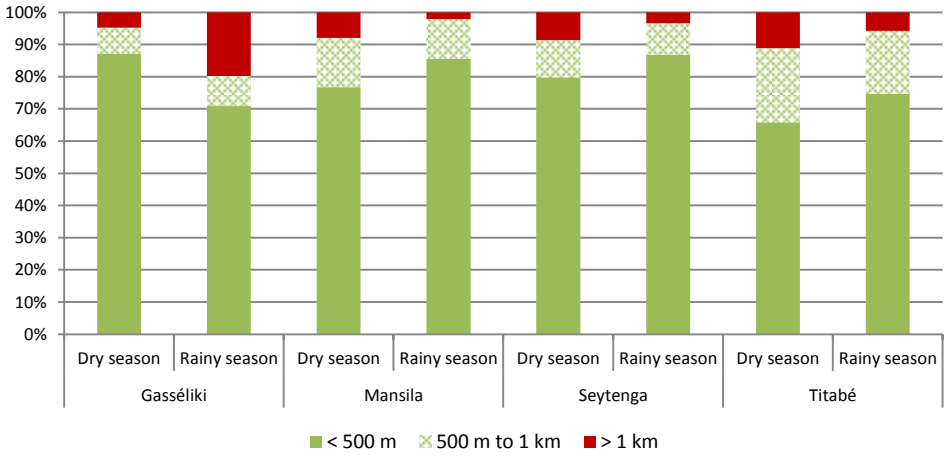
Findings – Level of service

Distance

Stand pipes

In the four small towns, users cover less than 500m to reach the stand pipe at any time of year.

Hand pumps



15 to 35% of users cover more than 500 m, in any season, and of these 5 to 20% cover more than a kilometre

Findings – Level of service

Crowding

Stand Pipes

The stand pipes serve fewer than 500 people per day (120 to 170 people per tap) throughout the year.

Hand Pumps

In Gasséliki, Mansila and Seytenga 30 to 60% of the hand pumps are frequented by more than 400 users a day, in the dry season.

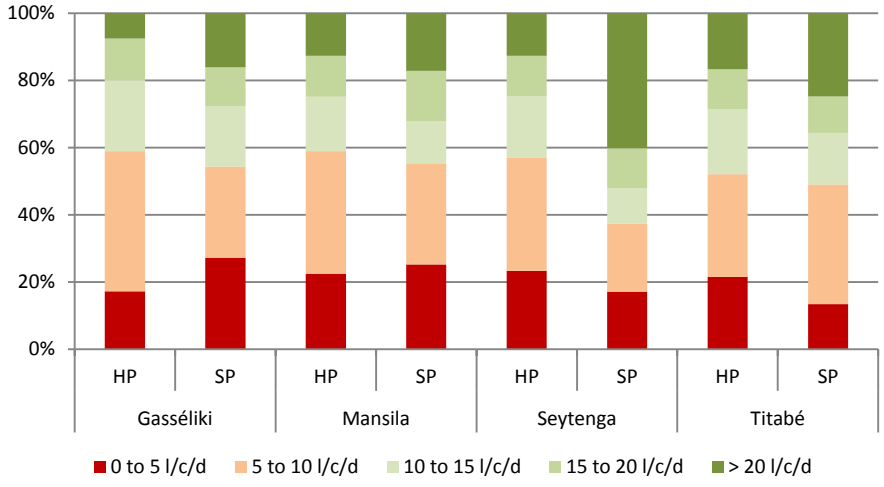
Findings – Level of service

Quantity: Average consumptions are comparable despite the huge difference in tariff.

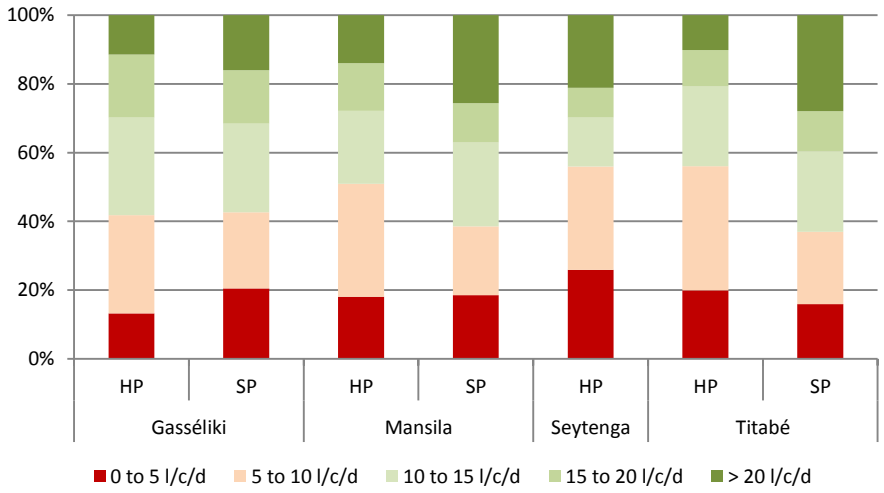
A higher proportion of SP users fetch more than 10 l/p/d.

Twice as many consume more than 20l/c/d (40% in Seytenga)

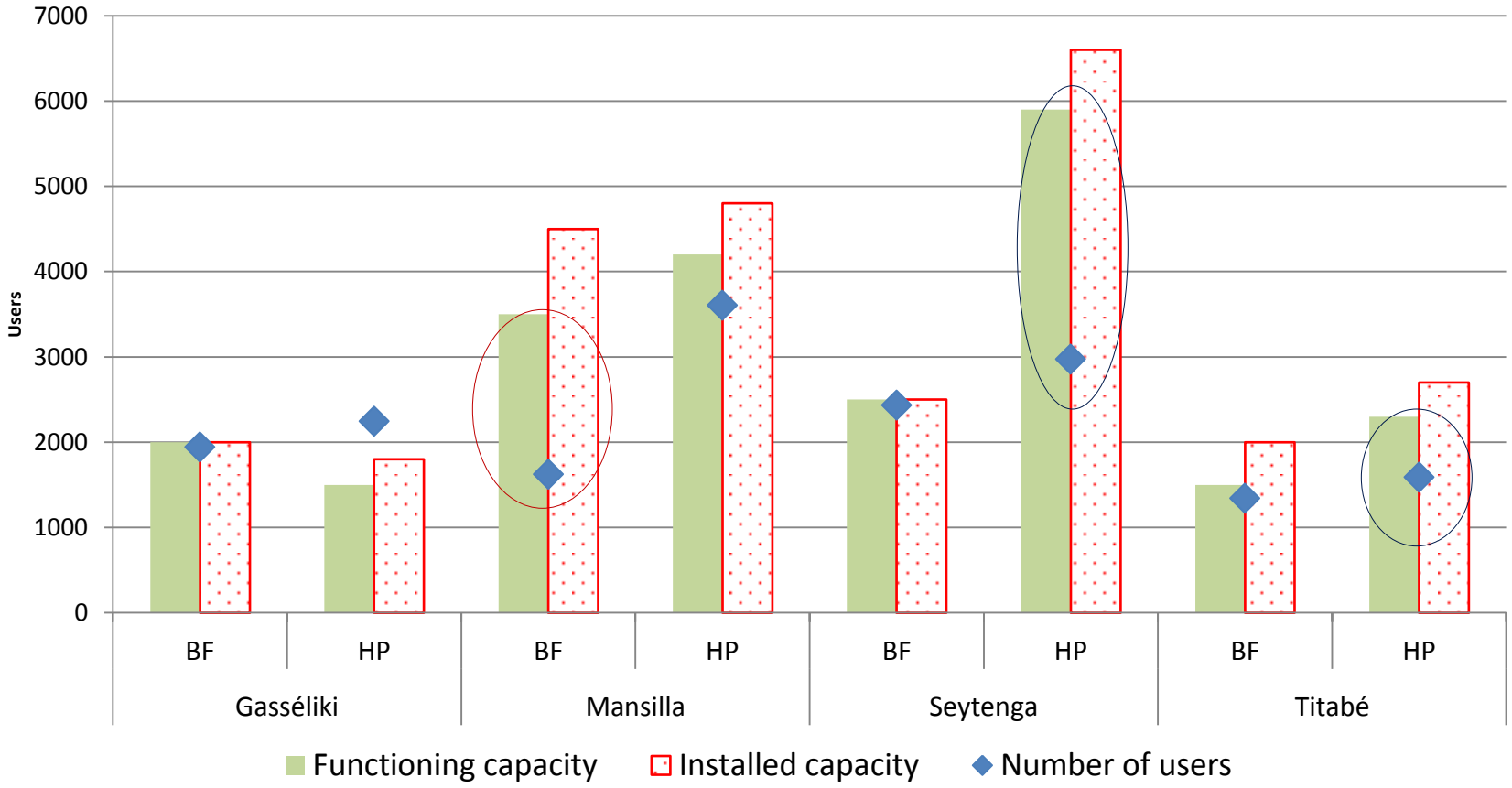
Volume per capita per day in dry season



Volume per capita per day in rainy season



The demand for a service is there



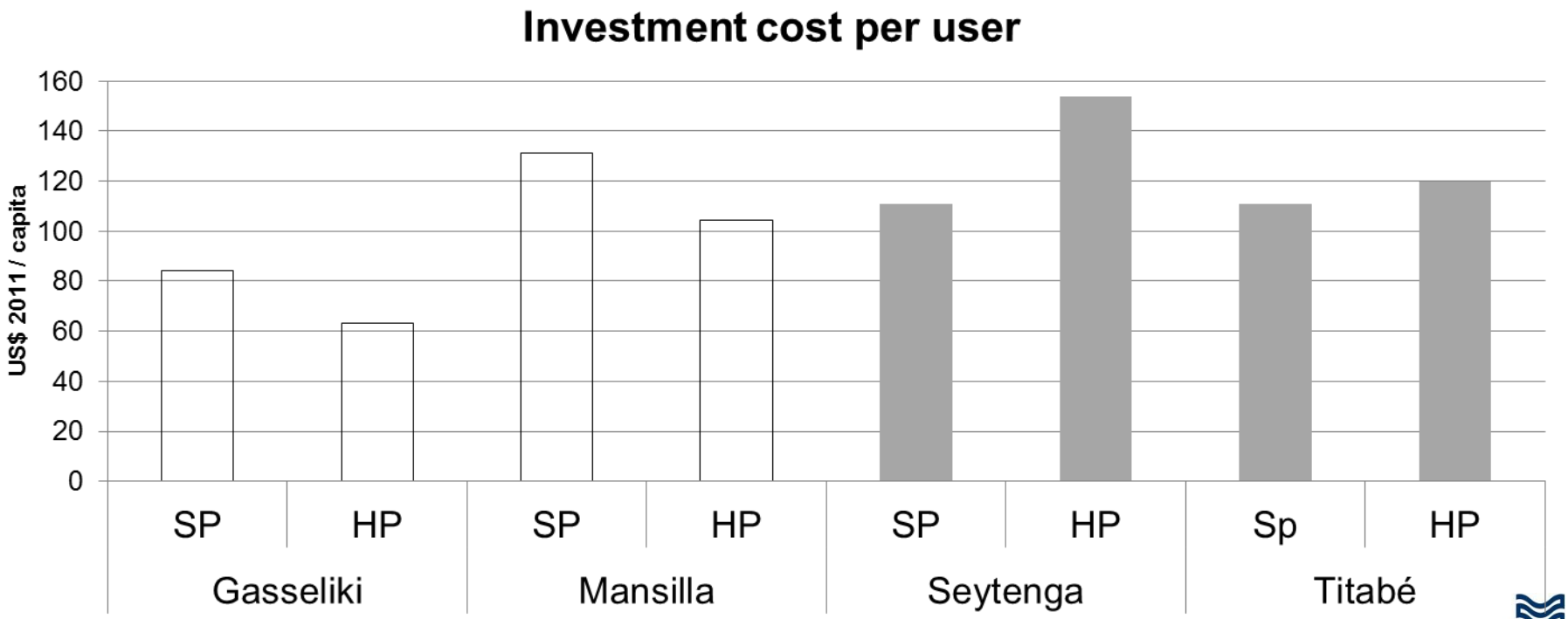
After three years, the stand pipe users are proportionally more regular than those at the hand pumps: they go there in dry and rainy seasons.

At hand pumps, three quarters of users only come during the dry season when alternative sources have dried up.

Findings – Life cycle cost

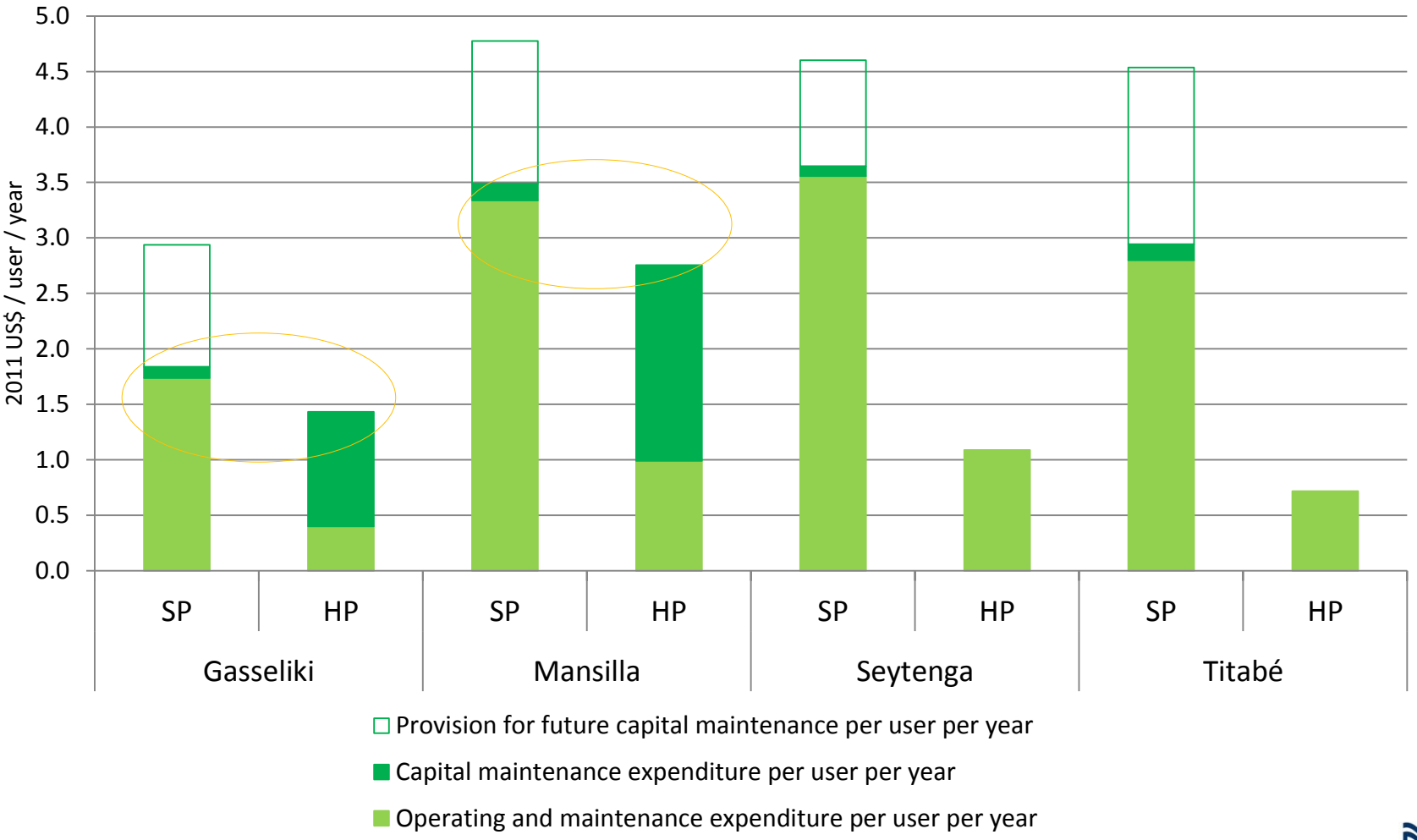
Investment per design capita: in theory, unit investment costs are higher for SP, except in Mansila where the piped scheme supplies 9 SP.

Investment per capita: 2 piped schemes cost less than hand pumps because of demand and functionality. For the 2 piped schemes that are more expensive, the difference with HP is ~20$/capita.



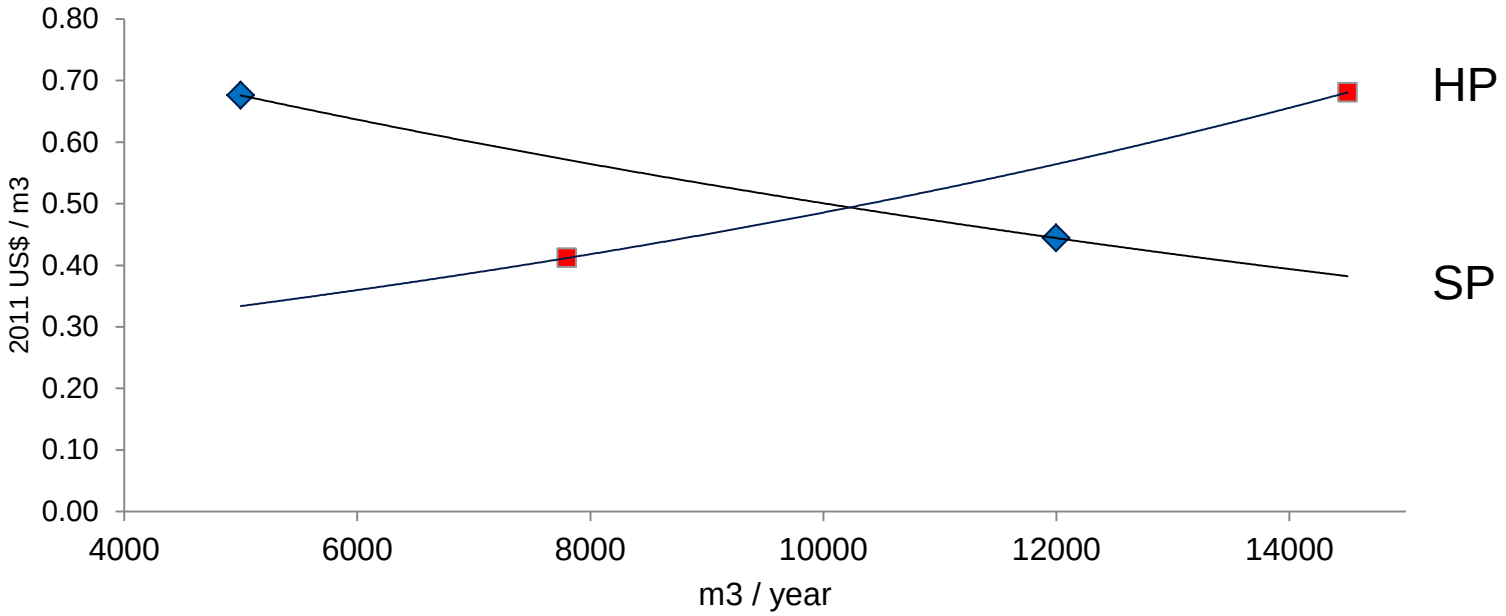
Findings – Life cycle cost

Higher unit **operating and capital maintenance cost** for piped systems



Findings – Life cycle cost

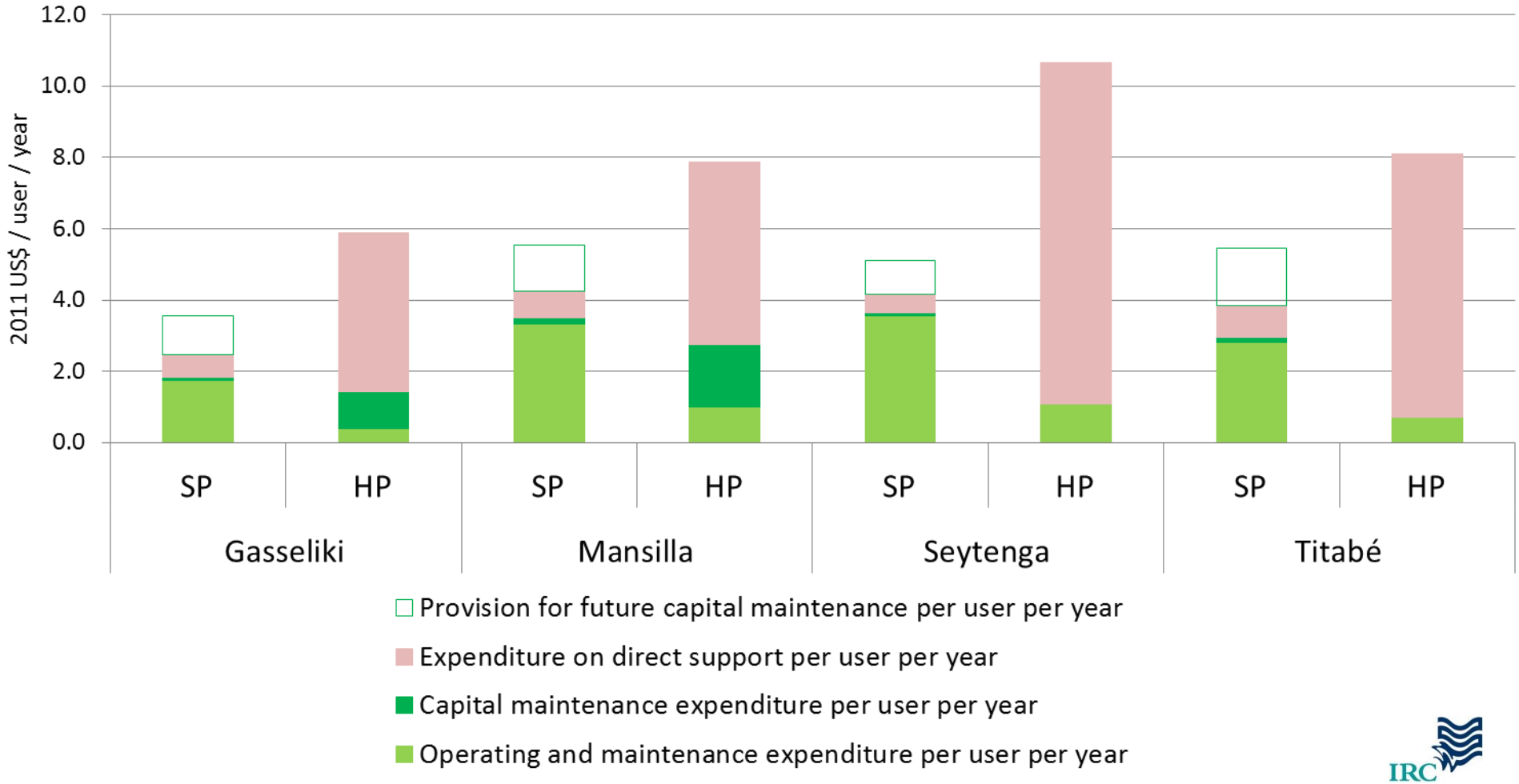
Decreasing unit operating and capital maintenance cost of piped systems with **volume**



In Mansila, the m3 distributed by SP costs $0.44 per year in operating and capital maintenance costs, as against $0.68 per year for HP

Findings – Life cycle cost

Support costs to local water authorities and HP service providers blow the LCC of HP service out of the water



To conclude

- Piped schemes deliver a better service at lower cost than hand pumps
- The scale at which piped networks are more cost-effective can be 3 times lower if ALL water uses are considered
- It costs less to operate and maintain a piped scheme than to oversee and organise a HP service of similar size
- Even in the poorest region of one of the poorest countries in the world, there is a demand for a water service.

- Extension of piped schemes is the best option: it improves the access to water AND lowers the unit cost which eventually makes it possible to serve the poor.
- More attention should be paid to support the water authorities in their regulatory function and to make sure economies of scale primarily benefit the poor.

- What has IRC done with it ?
  - Informed FasoHydro on the profile of users
  - On request of communes, IRC organised and facilitated discussions between Ministry, local authorities and FasoHydro after the piped systems stopped in 2012
  - Design a monitoring framework that is being piloted in 2 communes for 6 months (70 HP services and 2 piped schmes)