THE INDONESIAN WATER SUPPLY ASSOCIATION (PERPAMSI)

in the context of the Seminar on Developing Countries at the 14th IWSA Congress would like to present a number of findings and conclusions from several

CASE STUDIES ON PUBLIC TAPS

An abstract from the case study in Jakarta for taps built under the City's Kampung Improvement Project is attached to the script of this short presentation for further reference.

1. Requirement

The basic requirement and potential benefit for public tap water in low income urban areas is so obvious that it needs no further explanation. The World Health Organisation is promoting the very generous standard of one public tap per 100 capita. Concern for the matter is very strong on the side of International Institutions and Donor Countries as well as within the institutions of the developing countries.

The practical implementation of public tap schemes however shows that public taps are not the easy and ready made solution they may appear to be at first sight. The public acceptance of such schemes in many instances was found to be considerably below expectations. Other water sources like private shallow wells or deep wells and even open water courses compete with the use of public stand pipes despite the difference in quality. A survey in one city showed that priority given to a public water supply by the people concerned was far behind the demand for better streets, bridges, public transport, drainage facilities, market places and other facilities. The importance of safe water supply and its recognition as a public obligation and service is not yet instilled in many people.

2. Social Obligation

The social obligation of the Waterworks Enterprise and the need to subsidize the water made available to low income groups is well recognized in Indonesia. The water pricing structure in the City of Bandung presented below may serve as an example for the approach taken:

Consuption in m3/month	Households Rp	Business Rp	Industry Rp	Social Org. Rp	Public Taps Rp
up to 15	60	70	125	30	30
16 to 30	50	70	150	40	30
above 30	100	170	200	50	30

Whereas the price of water consumed per connection is increased with higher consumption for all user categories to prevent wastage of water, the rate as public stand pipes remains at the lowest social rate without regard to consumption.

Yet another mean used to facilitate the access to public water for the lower income families is the possibility of payment by installement for the cost of private house connections.

3. Financial and Technical restraints

Waterworks Enterprises in Indonesia are required to generate their own revenue out of the sale of water. Partial subsidies are available only for investment cost. Considering, that for example in Jakarta in 1969, some 60 % of the total population lived in urban poor areas - potentially to be supplied by public taps - it is abvious, for reasons of financial restraints, that:

- water at public stand pipes cannot be supplied free of charge
- the sale of subsidized public tap water has to be limited to a bearable proportion of total sale, because the subsidy has to be generated within the Waterworks Enterprise.

Another most obvious constraint on the technical side is the fact that water can only be sold after it has been produced in the first place. A disregard of this trivial fact is the cause of so many a deteriorating water supply networks in Indonesia. It is therefore not possible in many cities today to provide public tap water without first making major investments in water production facilities of outright cutting-off existing private connections.

4. Socioeconomic context

The traditional source of drinking water in urban poor areas in the larger Cities in Indonesia is the water vendor, who hand carries and sells a daily supply of water to each household. Water so bought is up to 50 times more expensive than piped water at a private tap. The daily drinking water requirement may thus absorb up to 20 % of available income of urban poor families.

It is obvious that a dense network of public taps would remedy this burden. Consideration must however also be given to the fact that 5 % or more of the population relies on this water vending business as their often only means of income. Public taps can destroy tens of thousands of such barefoot entrepreneurs who create a considerable and important micro economic cycle in their area.

5. Conclusions

The obvious immediate benefits of public stand pipes and the quick and seemingly simple implementation of respective programs tends to disquite the complex nature of such schemes in practice. A simple application of WHO standards without taking into consideration the socio-economic, financial, technical and institutional restraints is bound to result in disappointment and waste of money.

PUBLIC TAPS :

CASE STUDY IN JAKARTA MUNICIPALITY CITY UNDER THE KAMPUNG IMPROVEMENT PROJECT

1. Introduction:

Kampung Improvement Project (KIP) is one of the numercus projects undertaken by the Government of Indonesia to improve the health and environment situation and create a better atmosphere for living. This project was primarily financed by the world Bank (IBRD) in assiting the technical aspects intended for upgrading and developing an urban area in accordance to the hasty and rapid development which occurs in the rural area in the vicinity.

Scope of work which has been done consists of rearranging the present sporodical urban planning, constructing roads, bridges, drainage facilities and supplying decent watersupply through distribution mains and public taps (hydrant). Also included are sanitation facilities such as refuse disposal and public bath-latrines. This paper consists of a summary concerning Public Taps constructed by the KIP Project in the Jakarta Municipality City as a case study.

* Kampung = urban area.

2. Public Taps:

(a) Urban I/1974-75

Table I summarizes the findings for 1974 - 75 (Appendix B-1), which includes 47 kampungs, as follows:

(1) No. of taps planned - 318 (100% of 318).
(2) No. of taps built - 304 (96% of 318).
(3) No. of taps operating - 123 (40% of 304).
(4) No. of taps not operating - 181 (60% of 304).

The tabulations show that the numbers of taps built are essentially the same as planned, considering the contingencies involved in planning versus construction. The difference of 14 units (318 less 304) is due mostly to unavailability of sites (luck of donors) due to lack of confidence by the potential donors that these additional taps could be profitably managed under the existing holder system.

Of the total of 181 taps not operating (representing 60 percent of the total installed), in 149 (82%) of the cases the problem was institutional, namely inability to sign up a holder due to lack of confidence by the potential holder that the holding contract would be profitable, especially after the first several of the group of taps in a kampung had been assigned to holders.

It is noted that, for the 1974-75 programme, the year started off using a design standard of 1 tap per 4 ha, which was changed during the year to 1 tap per 2 ha.

Of the remaining 32 taps (18%), the delays in getting them into operation are due in most cases (23 taps in 3 kampungs) to institutional (handover) delays, and in only a few cases (9 taps in 2 kampungs) were there physical construction problems.

(b) Urban I/1975-76

Table 2 shows the summarized data for 1975-76 programme, for which construction has been only recently completed, hence most of the taps are not yet in operation, mostly for institutional reasons.

Of the 492 taps planned, only 395 (80%) were built, the dropoff of 97 being due mostly of lack of need ascertained at time of construction (84 cases or 87% of the total of 97 taps not built, covering 11

kampungs). Of the remaining 13 not built, the major reason was lack of site, again indicating possible lack of need or excessively high price levels.

Of the 395 taps built, 153 (39%) are waiting only on holders and the real need for many of these is questionable.

3. Delivery of water to kampungs from municipal system:

While the total delivery of 400 ℓ/sec to the kampungs may appear to be small, it is recognized that kampung residents will generally continue to obtain the bulk of their water needs from shallow groundwater, with the PAM water municipality water service used mostly for cooking and drinking.

4. Field Inspection:

4.1 Central Jakarta

The kampungs in central Jakarta, included Karet Kubur, Karet Tengsin, and Menteng Sukabumi. At Karet Kubur, where 5 taps were built and 2 reported in use, one was found to be in use (with a holder who distributes water via plastic pipes to a group of families using plastic hoses), and the second is soon to be put into use (the potential holder now has accumulated his franchise fee and is ready to sign up with PAM).

At Karet Tengsin, of 7 taps installed, only one has a holder, who is doing a good business, but there seems little interest in activating the other 6.

At the third kampung in the central area, Menteng Sukabumi, of the 6 taps installed, 4 have metered PAM connections, but only one has a holder, who sells to vendors. There seemed to be little chance for the other taps to get holders.

4.2 Coastal Zone

In the coastal zone kampungs, where shallow ground water is not available, the situation on taps is quite different. All taps in this zone having adequite pressure do have holders and are amply busy and moreover are neatly maintained and appear to be operating "as designed".

5. Summary of Inspection:

The field visits confirmed that, with the existing holder system and the price levels for sale to the public there is ready use of taps only in areas where shallow ground water is not available, and little use where it is; however, there appears to be a significant public demand for tap water even in areas where shallow ground water is plentiful where also the sales price is low.

The parameters involved are (1) the minimum desired level of service, (2) the cost for furnishing this level of service, including operation and maintenance costs, and (3) the public willingness to pay.

6. Number of Taps Needed:

There is a definite need for public taps in kampungs where shallow groundwater is not readily available or unavailable.

The number of taps needed in a particular kampung can range from very few or none, to 1 per 2 ha or more, depending upon how many residents will prefer not to use the taps because of their other alternatives.

The number of taps needed will be whether the source of the water is from the municipal system or from a deep well. Regardless of the technical facts on relative water qualities, in the public mind the municipal supply is superior, hence sells better, with the deep well water perhaps being regard sometimes as not much better than the shallow groundwater.

Another factor on number of taps installed is the problem of obtaining tap sites. Usually such sites are "donated" by the potential holder, and if there appears to be a ready market, such donations are forthcoming, and if not they will not be. Estimate on number of taps needed may be subject to change at time of construction to the extent his estimate of the market may not agree with the estimate by the potential holders. Even after the taps are built, the potential holder may not wish to enter into a franchise agreement if his assessment at the time indicates he cannot recover his franchise fee within a period of 2 or 3 months.

7. Tap Concessionnaires (Holders)

It has been Municipal Water Company (PAM) policy to seek, a concessionnaire ("holder") for each public tap (whether serving municipal or deep well water), who has had to make a payment, which is not really a franchise fee but an advance payment which is returned to him by crediting this amount to the water use charges assessed on him by PAM. Usually this holder then utilizes a group of vendors who retail the water to the public.

While the system described above has worked satisfactorily the experience record shows a significant percentage of the taps already built are of "marginal" value and that holders likely will not be forthcoming for these. By "marginal" it is not meant there positively is no public demand or need, but rather than the potential holders do not view the opportunity as financially attractive. Because the holder expects to do enough business to recover his advance payment within 2 or 3 months (representing a very high rate of return), the existing franchise system may in some cases deny the public from access to tap. Also, where there is no holder, there is no continuing security for the tap facility, the tap facility may in time become

inadvertently damaged. Also, there may be considerable "leakage" of water at such taps, again due to lack of security, despite the fact the shut-off valves are in locked boxes.

In conclusion, with the present system of holders and resulting price levels, it appears (a) there is strong public use of taps only in the limited areas where shallow groundwater is not available, and (b) little demand where it is available, especially where it is plentiful and easily obtained with hand pumps.

TABLE 1

SUMMARY OF DATA RELATING TO PUBLIC TAPS

URBAN I/1974-75

Code No. of Kampung	No. Taps Planned	No. Taps Built	No. Taps Operating	No. Taps Not Operating
1	6	6	0	6
2	3	3	3	0
3	1	1	1	0
4	4	4	4	0
5	5	6	4	2
6	3	3	3	0
7	6	6	6	0
8	4	4	0	4
9	2	2	2	0
10	7	7	7	0
11	7	7	0	7
12	6	6	6	0
13	5	5	2	3
14	7	7	3	4
15	12	8	4	4
16	20	18	3	15
17	3	3	3	0
18,19	15	-	9	6
20	9	5	0	5
21	5	5	5	0
22	7	7	6	1
23	16	16	1	15
24	15	15	5	10
25	3	3	3	0
26	8	8	8	0
27	6	6	3	3
28	7	7	7	0
29	7	7	4	3

Tabel 1 (continued)

Code No. of Kampung	No. Taps Planned	No. Taps Built	No. Taps Operating	No.Taps Not Operating
30	4	4	4	0
31	9	9	7	2
32	7	6	6	0
33	3	3	3	0
34	9	9	0	9
35	10	10	0	10
36	6	6	0	6
37	5	5	0	5
38	5	3	0	3
39	6	6	0	6
40	2	2	0	2
41	12	11	0	11
42	9	9	0	9
43	10	10	0	10
44	8	8	0	8
45	4	4	0	4
46	3	3	1	2
47	7	6	0	6
Totals	318	304	123	181

TABLE 2

SUMMARY OF DATA RELATING TO PUBLIC TAPS

URBAN I/1975-76

Code No. of Kampung	No. Taps Planned	No. Taps Built	No. Taps Operating	No. Taps Not Operating
1	20	20	0	20
2	4	3	3	0
3	10	10	0	10
4	11	9	0	9
5	18	18	0	18
6	6	6	0	6
7	8	7	0	7
8	4	4	0	4
9	2	2	2	0
10	31	31	0	31
11	8	8	6	2
12	10	10	5	5
13	4	4	4	0
14	17	17	0	17
15	21	21	0	21
16	16	16	0	16
17	2	2	2	0
18	5	5	3	2
19	18	11	7	4
20	15	15	0	15
21	7	6	0	6
22	9	9	9	0
23	11	11	11	0
24	5	5	5	0
25	16	14	0	14
26	8	3	0	3
27	6	4	0	4
28	14	8	0	8

Table 2 (Continued)

Code No. of Kampung	No. Taps Planned	No. Taps Built	No. Taps Operating	No. Not Operating
29	12	12	0	12
30	5	5	0	5
31	11	9	0	9
32	25	10	0	10
33	5	5	0	5
34	15	15	0	15
35	4	4	0	4
36	22	0	0	0
37	22	10	0	10
38	7	6	0	6
39	16	14	0	14
40	15	5	0	5
41	13	13	0	13
42	8	6	0	6
43	6	2	0	2
Totals	492	395	57	345