

## A report on simple, low cost, effective house survey and repair programs in the Northern Territory, Australia

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### **Background.**

In 1997, Northern Territory (NT) Government agencies introduced a housing survey instrument (Environmental Health Infrastructure Maintenance Scheme, EHIMS) that has resulted in more than \$20 million being expended with only one statewide report in 3 years (NTDLG 2000a). This report contained low data validity, little comparability of houses and/or communities, and no data on house function is available at the community level.

In 1997, a new simple low cost house survey and repair program was developed by the author and carried out at Ramingining in Arnhem Land NT, in response to resident concerns over deteriorating house conditions. Detailed lists of repairs were provided to community housing teams and data was provided from subsequent surveys to enable the community to make informed housing decisions.

In 1998, this process was repeated and measurable improvements in house function were achieved, concurrent with a dramatic drop in presentations at the local Health Centre (Hardy, unpublished). After health results from this survey were reported, advocacy arose from several quarters in the NT and the Indigenous Housing Authority Northern Territory (IHANT) specifically funded annual house maintenance on indigenous communities up to \$1,700 per house. This funding was for health and safety repairs and was linked to requirements for an annual survey, adequate rent collection and a community-based computerised housing management system. The IHANT board is comprised of ATSIC elected members and NT and Commonwealth Government officers, who formulate policy on the distribution of approximately \$38M per year of housing funds in the NT. Their program managers are Territory Housing and the NT Department of Local Government.

In May 2000, Katherine West Health Board (KWHB) employed the author with the major objective of improving housing function in their region. The survey process at Daguragu and Kalkarindji commenced in the following month. This successful new program has continued on an annual basis and the last survey was carried out in the first week of October 2001.

### **Survey methods**

Two survey instruments were compared in this study. The first, required by IHANT, was the "Housing-Environmental Health Survey". When completed, this form is submitted to Territory Housing for data processing. The second survey instrument was the "Housing Survey Form Ver. 4" (Table 1). This was sufficiently comprehensive to enable communities to get useful data for making decisions about housing work. The information in this report is based on data gained from the use of this instrument at Ramingining, Daguragu and Kalkarindji communities. This form was based on principles developed for and espoused in the UPK Report (SAHC 1987), Housing for Health (Pholeros et al. 1993) and the National Indigenous Housing Guide (HealthHabitat 1999). This form was used to assess houses in Ramingining in 1997, 1998 and 2000 (Hardy 1997, 1998, 2000; Laverack 1999).

The "fully functional" concept, at the heart of the work by Pholeros et al (1993), was used as the basic standard to determine functionality in these surveys. An example of this methodology is a dripping tap. Despite someone still being able to use the tap to wash his or her hands, the drip would soon render the tap useless. Thus it would be assessed as non-functional for the purpose of this survey. Similarly, a toilet cistern without a lid, despite it still being able to be flushed, would fail due to an increased likelihood of malfunction.

The author organised and trained all the surveyors in the Ramingining and Daguragu surveys described in this report. He also worked as a surveyor himself in all but the Ramingining 1999 survey. Prior to the surveys, all surveyors participated in theoretical and practical training sessions on how to use survey instrument to ensure that findings were recorded in a standard format for subsequent analysis.

A Serviced Land Availability Plan (SLAP Plan) was used to identify the houses to be surveyed. Each house was ticked off the map as it was surveyed to ensure houses were not assessed twice. The surveys

were usually carried out in one or two visits to each community. Local residents accompanied the surveyors on each house visit and informed, prior consent was gained from all residents.

The author collected the survey forms and maps, checked that they were completed correctly and compiled lists of the work required that were sent to the community tradesmen.

### **Comparison with the Territory Housing Maintenance Program**

The NT Department of Local Government and Territory Housing, as the IHANT Program Managers, have published several documents describing the IHANT housing maintenance program (NTDLG 2000a-c). These documents, and others, were examined to determine the intentions and actual outcomes of the Territory Housing run housing maintenance programs, for comparison with the programs run at Daguragu and Ramingining. The author was advantaged by having over 4 years experience of both survey & repair processes. As a result of this review, 21 criteria, that in the view of this author, a housing survey and repair program for remote indigenous communities should fulfil, were used to compare the programs and a comparative table was prepared (Table 2).

## **Overall house functionality results**

### **Ramingining**

After the first year (1997-1998), Ramingining was able to maintain a reasonable standard of house function with a concurrent downward trend in Health Centre presentations, which remained low until the end of 1999. A significant finding is that the major drop in Health Centre visits occurred when the mean functionality of the houses exceeded 60%. This has become the target of the program in the Katherine West Region.

### **Daguragu and Kalkarindji**

The mean functionality of the houses in Daguragu decreased over time. Repairs were performed and work-order records sighted. One explanation is that the houses were simply beyond economic repair and the IHANT funding (\$1700 / house) and the rental components for maintenance were insufficient to maintain the houses in a healthy and safe condition. The ability to detect changes in house function, whether or not work was carried out, and to monitor when a house or group of houses is beyond economic repair is an important capability and constitutes a key tool for managing community houses.

## **Other Aspects of House Function**

For specific health hardware items, such as hot water availability and shower function, it is useful for community housing managers to know the overall maintenance status. If the plumbing is up to standard, then a special resource allocation to hot water provision is possible. It is noted that the hot water availability rose dramatically in the 1999 survey. This occurred at Ramingining in 1998 and demonstrates that valid data, on the functionality status of the houses, is useful in managing limited resources and supporting health.

Another example is washing machines. At Ramingining in 1997, only 35% of the houses had a functional washing machine. Thus 245 people in a remote community had no working washing machine in their house, with an average of 9.2 people per house. On this basis, funds were sought from ATSIC for a Laundromat was constructed and has been operational ever since with important financial returns to the community.

## **Comparisons of the Two Survey Processes**

Based on the criteria set out in this report, the Territory Housing surveys process has fundamental problems since it could only answer "yes" to 5 of the 21 criteria while the alternative process was able to answer "yes" to all but one of the questions. The one "no" being that KWHB received no IHANT funds for the survey process. Many of these problems were confirmed by the August 2000 evaluation of the program (NTDGL 2000a). This report commented that:

- Not all houses could be surveyed.
- There was no protocol for a number of steps in the data collection process.
- The way data was collected varied between Field Officers and the way an individual officer collected data, varied between houses.

- The method of assessing the condition of items should be standardised and items should be physically tested.
- There is no feedback to communities or Field Officers of the survey at this stage.

Perhaps the most glaring of the problems with the Territory Housing survey are:

- No pilot study - many of the problems may have been identified & corrected.
- There seems to have been no training of the surveyors to standardise the process.
- The survey instrument has too many questions and confusing coded answers.
- There was no way to directly assess overall house functionality from the form.
- Some 20% of the houses received maintenance funding despite having no survey.

An estimated 50% of communities, (based on experience in the Katherine West Region) were surveyed and received funding, but failed to carry out any maintenance work! Without indicative data, such as ratings, or a detailed annual analysis of the data, change could not be detected. If the 21 suggested criteria could be addressed by future survey processes, there would be a better system to inform communities and hence better housing management outcomes.

### Failures of the Territory Housing System

It is not the intent of this report to criticise IHANT, which has been an instrument for the advancement of indigenous housing after many years of fragmented, wasteful and ineffective housing services. The evidence for poor past management is the currently appalling condition of much remote indigenous housing in the NT (NTDLG 2000a), and the chronic overcrowding and ineffective maintenance system. IHANT has achieved indigenous control of house maintenance funding and the evidence of the House Maintenance Program suggests that they could be provided with a better information basis for project manager decision-making.

**Table 1**

Ramingining, Daguragu and Kalkaringi House Functionality Survey Statistics – 2000 - 2001.

COMMUNITY	Ramingining				Daguragu		Kalkaringi	
SURVEY YEAR	7/97	8/98	8/99	10/00	6/00	6/01	6/00	6/01
NUMBER OF HOUSES SURVEYED	46	53	63	60	44	44	45	43
Mean number of bedrooms/ house	3.8	3.8	3.7	3.9	2.7	2.7	2.7	2.8
Mean number of people / house.	9.2	8.6	8	7.9	5.3	6.3	6	5
Mean number of people / bedroom.	2.4	2.3	2.2	2	2	2.3	2.2	1.85
Houses-floor/ wall/ ceiling repairs required.	40%	28%	6%	38%	74%	75%	45%	26%
Houses electrically safe.	37%	79%	74%	63%	30%	30%	53%	36%
Houses with a safety switch.	N/R*	N/R	N/R	60%	N/R*	100%	N/R	93%
Houses needing door & window repairs.	70%	35%	28%	28%	95%	93%	67%	26%
Houses with hot water.	42%	61%	92%	87%	54%	70%	70%	83%
Houses with a functional shower.	30%	81%	92%	60%	45%	36%	78%	64%
Houses with a functional hand basin.	35%	77%	85%	70%	26%	25%	73%	88%
Houses with tub for washing kids.	14%	23%	34%	12%	0%	2%	50%	60%
Houses with functional laundry tub. Tub.	30%	70%	90%	75%	44%	41%	75%	81%
Houses with a washing machine that works	35%	42%	25%	32%	21%	18%	50%	64%
Houses – access to public washing machine	2%	2%	100%	100%	7%	7%	3%	3%
Houses with a functional toilet.	65%	56%	94%	75%	60%	57%	65%	71%
Houses with blocked toilets.	2%	N/K*	0%	3%	5%	14%	10%	26%
Houses with a functional kitchen sink.	33%	84%	96%	88%	51%	48%	75%	79%
Houses with stoves with at least 2 hotplates working	35%	61%	70%	72%	49%	82%	93%	95%
Houses with kitchen cupboards with doors & smooth impervious food prep. surfaces.	35%	67%	60%	53%	12%	7%	35%	17%
Houses with a fridge that works.	N/R	N/R	47%	53%	33%	66%	88%	79%
Houses with a functional fence.	N/R	N/R	6%	3%	24%	43%	85%	40%
The mean number of dogs / house.	3	2.4	2.5	1.8	2.4	2.9	2.6	2.8
The mean house functionality rating.	42%	65%	71%	69%	35%	25%	61%	59%

\* N/R: Not recorded, \*\* N/K: not known due to a whole street sewerage problem at the time of the survey

**Table 2**

Comparisons of the Territory Housing survey &amp; repair process and that run in Daguragu and Ramingining.

CRITERIA FOR COMPARISON OF THE 2 PROGRAMS.	Territory Housing Program	Daguragu & Ramingining Programs
Were the surveyors trained to use the survey form in a standardised way?	NO	YES
Was the concept of FULL health hardware functionality explained to all the surveyors?	NO	YES
Was the survey instrument simple enough for surveyors to use it without training?	NO	YES
Was the survey instrument user friendly for community based staff?	NO	YES
Were the questions on the survey instrument clear about what they were assessing?	NO	YES
Did the survey instrument ask for an assessment of FULL health hardware functionality?	YES	YES
Were all the questions on the form completed for every house prior to leaving the community?	Often NO	YES
Was the survey instrument piloted?	NO	YES
Could the overall functionality of a house be readily assessed from the survey form?	NO	YES
Was the database to be used piloted?	NO	YES
Did the survey report base its data on FULL health hardware functionality?	NO	YES
Were any missed houses followed up?	Often NO	YES
Were lists of the work to be done forwarded to the community as soon as possible after the surveys?	YES	YES
Was a detailed analysis of the data from the surveys done for each community?	NO	YES
Was a detailed report based on the data from the survey provided to each community within several weeks of the survey?	NO	YES
Did the communities have a housing management program?	YES	YES
Were the second or third round of the surveys able to detect whether the work had been carried out or not?	NO	YES
Were there increased efforts to collect rent as a result of this program?	YES	YES
Was the survey instrument or process evaluated and modified to improve the quality of information collected?	NO	YES
Did the community get enough information from the survey to better manage their houses?	NO	YES
Was the survey work of your organisation funded by IHANT?	YES	NO

## Conclusion

The level of information available from the Ramingining and Daguragu surveys is timely and focussed on health benefit. It gives a general assessment of house functionality and allows for comparisons year-by-year, house-by-house, community-by-community and regionally. It facilitates good housing management, to the health & social benefit of the community. The Territory Housing Survey Form and Process do not promote these facilities. In general, communities do not receive annual reports on their house function status and have no reliable measure of performance. In the recurrent expenditure of significant amounts of public funds on health & welfare, the tenets of Needs Based Funding & Best Practice require a decision process, founded upon valid and reliable data. In the Northern Territory, such process is now evidenced, almost exclusively, at Ramingining and the communities of the West Katherine Region.

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