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**Report Card on Service of Bhoomi Kiosks:
An assessment of benefits by users of the
computerized land records system in Karnataka**

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Report Card on Services of Bhoomi Centres:

Executive Summary

The Department of Revenue, of the Government of Karnataka, has set up computerized land record kiosks (Bhoomi centres) in taluk (sub-district) offices to provide farmers with the Record of Rights, Tenancy and Cultivation (RTC). The Bhoomi project was expected to speed up delivery of RTCs, without delays, harassment or bribery. This empirical assessment, carried out as part of the Governance Knowledge Sharing Program of The World Bank, Washington DC, highlights the benefits that accrued to users of Bhoomi Centres. The assessment made use of the Report Card methodology using feedback from users to carry out the assessment.

How was the study carried out?

The Report Card on the Bhoomi initiative sought to assess benefits derived by users of Bhoomi Centres in relation to improved quality of service and satisfaction. A sample survey was carried out with citizens who have used Bhoomi kiosks as well as a control sample of those who have used non-computerised land record providers. Quality of service and user satisfaction was compared across these two groups, to derive conclusions on the impact and benefit from the Bhoomi initiative. Data was collected from six districts reflecting geographic regions of Karnataka, and two Bhoomi kiosks were selected through sampling (weighted by intensity of use) among the kiosks operating in each district. A total of 198 respondents were interviewed across the Bhoomi kiosks. For the non-computerised facility user sample, four taluks were selected and 59 respondents interviewed. A team from AC Nielsen - ORG - MARG carried out the field survey and preliminary analysis.

Findings from the survey with users of Bhoomi kiosks:

Ease in use of the Bhoomi kiosks: Many users (66%) were able to utilize the Bhoomi kiosks with no help, in contrast with 25%, in the case of the manual system. Most users of the Bhoomi system (78%) found the system to be very simple. Many of the Bhoomi users (68%) had also made use of the manual system in the past; a majority of users (78%) who had past experience with the manual system found the Bhoomi system more simple.

Complexity of procedures: Most users (79%) of the Bhoomi kiosks did so without having to meet any official except the counter staff, in contrast with 19% who had to meet one official, in the case of the manual system. The extent of complexity is reflected in the fact that 61% of the users of the manual system had to meet two to four officials for their work. Legacies of the manual system have not completely faded away. About 18% of Bhoomi users reported that their document was not signed by the appointed village accountant, operating the kiosk. 6% reported that they filled out an application form for issue of an RTC.

Errors in documents received: Users indicated that the Bhoomi kiosks provided error free documents to more users (74%), in contrast with 63%, in the case of the manual system. Among those reporting errors, wrongly spelt names were the most frequent error (81% in case of manual system, and 53% in the Bhoomi system). However, major errors in land details were the issue for 31% of those who reported errors in the manual system, in contrast with 4% in case of Bhoomi users.



Rectification of errors: Given that errors are not unusual at this stage of development of the Bhoomi system, how efficient are the response systems? Almost all users of the Bhoomi system had confidence to complain and sought rectification (93%) as compared to less than half (49%) in the manual system. Half the complainants (58%) got timely response in case of Bhoomi, while such response was reported by only 4% of those using the manual system.

Cost of service: All users of the Bhoomi facility who wish to receive a hard copy of the RTC are to pay a fee of Rs. 15/- each and receive a receipt for the same. A large segment of users (66%) reported that they did not get (collect?) a receipt for the payment they made.

Hidden costs: Citizens also incur hidden costs of time and effort to secure these certificates. Most Bhoomi users (79%) reported a minimal waiting time in the queue of 10 minutes or less, in contrast with 27% who could meet the concerned official in such short time. The bigger issue is the number of times a citizen had to visit these offices to get the certificate. While most users got the RTC (72%) with one visit to the Bhoomi kiosk, only 5% got it that fast in the manual system.

The most serious issue is that of corruption and bribery. Two thirds of the users of the manual system paid a bribe - 66% of them reported having to do so very often. In contrast, only 3% of the users of the Bhoomi system reported paying bribes.

Staff behaviour: While technical capacity of the system plays an important role in its success, the approach of people who handle the task is of critical significance too. Most Bhoomi users (85%) rated staff behaviour at the Bhoomi kiosks as 'good'; none of the users of the manual system rated staff behaviour as 'good'.

Overall Assessment

The benefits accruing to the Bhoomi user are of two kinds:

Tangible benefits: Bhoomi kiosks have significantly reduced the time that users spend on getting the certificate. A weighted average of the number of visits made for obtaining an RTC works out to 1.33 for the manual system and 1.11 for the Bhoomi kiosks. The benefit in terms of mandays saved is approximately 1.32 million mandays per annum, leading to savings of Rs. 66 million per annum in wages. The weighted average value of bribe paid in the manual system was Rs. 152.46 per person, while that in Bhoomi was Rs. 3.09. Even if we reduce the saving by the fee that they have to pay, of Rs. 15, the net saving is Rs. 134.37, and translates to a saving of over Rs. 806 million annually.

Intangible benefits: The users of Bhoomi also benefit from shorter durations spent in queues to get documents. The weighted average time spent in queues in the manual system was 27 minutes as against 21 minutes. Bhoomi kiosk users also had to meet lesser number of officials (weighted average of 1.43) when compared to users of the manual system (3.25). Similar benefits also accrued to Bhoomi users on timely response to complaints (58%) vis a vis users of the manual system (3.6%). A large proportion of Bhoomi users (85%) rated staff behaviour as good while none of the users of the manual system rated staff behaviour as good (63% rated it average).



Report Card on Services of Bhoomi Centres

Introduction:

The Department of Revenue, of the Government of Karnataka, has set up computerized land record kiosks (Bhoomi centres) in taluk (sub-district) offices. These kiosks provide farmers with the Record of Rights, Tenancy and Cultivation (RTC) - a document needed for obtaining bank loans, giving proof of ownership, etc. The Bhoomi project was expected to speed up delivery of RTCs, without delays, harassment or bribery.

There is anecdotal evidence on the benefits of the Bhoomi Centres. This empirical assessment, carried out as part of the Governance Knowledge Sharing Program of The World Bank, Washington DC, highlights the benefits that accrued to users of Bhoomi Centres.¹ The experiences of the Public Affairs Centre, and its work with Report Cards on Public Services, provided the tool for the assessment. The Centre had carried out a similar study on CARD services in Andhra Pradesh in 2000.

Background

The Department of Revenue in Karnataka has computerized 20 million records of land ownership of 6.7 million farmers in the state. Records of land ownership are required to facilitate sale and inheritance, or to provide proof of ownership to avail credit. Upon sale or inheritance of a land parcel, requests to alter land records had to be filed with the Village Accountant. Previously, farmers had to seek out the Village Accountant to get a copy of the Record of Rights, Tenancy and Cultivation (RTC). There were delays and harassment. Bribes had to be paid. The Village Accountant could afford to ignore or delay action on these "mutation" requests and delay the requests for certificates. Land records in the custody of the Village Accountant were not open to public scrutiny. Over time, several inaccuracies crept into the old system through improper manipulation by the Village Accountant, particularly with respect to government land. In practice, it could take 1-2 years for the records to be updated. The time to provide RTCs used to take 3 to 30 days depending upon the importance of the record for the farmer and the size of the bribe.

The situation has changed. In August 2002, for a fee of Rs.15, a printed copy of the RTC could be obtained online at computerized land record kiosks (Bhoomi centers) in 168 taluk offices. The remaining 9 taluks were expected to have a Bhoomi center by September 2002. Copies of land documents can be obtained for any land parcel in the taluk by providing the name of the owner or the plot (survey) number. A Village Accountant is available full-time at these kiosks. Farmers can get an RTC for any parcel of land in 5-30 minutes from an RTC information kiosk at the taluk headquarters since the land records are in the public domain. Any record can be viewed through a touch screen at 7 kiosks. There are plans to use the Bhoomi kiosk for disseminating other information, like lists of destitute and handicapped pensioners, families living below the poverty line, ration card holders getting food grain at concession prices, wholesale market prices and weather information.

The Report Card methodology is based on feedback from users of public services about quality, efficiency and adequacy of services, and problems they face in their interactions with service providers. Users may not be able to comment on technical features and

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standards of the services, but they are in a position to definitively assess whether the service meets their needs, and whether the agency is responsive, reliable and corrupt. Such assessments and ratings provide a basis for judging performance of service providers. The resultant pattern of ratings is then converted into a "Report Card" on services. Report Cards of this nature have been used to demand reforms in service provider agencies.

Approach:

The process of applying Report Cards to the Bhoomi initiative was addressed in a systematic manner. The objectives of this exercise were:

1. To assess benefits derived by users of Bhoomi Centres in relation to improved quality of service and satisfaction
2. To provide inputs on benefits derived by users (for RTC as well as cases of mutation) to carry out the cost benefit analysis of Bhoomi Centres.

A sample survey was carried out with a sample of citizens who have used Bhoomi kiosks as well as a control sample of those who have used non-computerised land records providers.

For the Bhoomi user sample, stratification was at two levels: district and taluks. Six districts were purposively selected to reflect geographic regions of Karnataka - Bijapur, Koppal, Hassan, Udipi, Chamrajnagar and Mandya. Two Bhoomi kiosks were selected through sampling (weighted by intensity of use) among the kiosks operating in each district. A total of 198 respondents were interviewed over the sample Bhoomi kiosks. Purposive over sampling was exercised at each Bhoomi Centre in order to approach the target of 33% sample among those users who sought RTCs following mutation of land records.

For the non-computerised facility user sample, the taluks where Bhoomi kiosks had not been set up were listed. Four taluks were selected through random sampling from the list - Udidpi taluk, Ankola taluk in Uttar Kannada, Gokak taluk in Belgaum and Channapatna taluk in Bangalore rural. A total of 59 respondents were interviewed among users of non-computerised facility.

The instruments for this effort was based on PAC's earlier work, and adapted for assessing the benefits of the Bhoomi initiative. AC Nielsen ORG MARG, a leading market research agency, which had worked with PAC on similar studies in the past, carried out the field survey. Interviews were carried out with respondents identified at Bhoomi Centres. Investigators conducted interviews at a place of the respondents' convenience.

The interviews addressed the following:

- Purpose of visit to Bhoomi kiosk
- Assistance required to use the service
- Number of visits required
- Number of officials met
- Time taken to complete the service
- Fees & Other costs
- Behaviour of officials
- Level of overall satisfaction
- Comparison with previous visits for similar purpose, prior to computerization

Twelve structured interviews were carried out with officials implementing Bhoomi kiosks to assess the operational benefits derived by service providers through the new facility.

The findings were used to arrive at a measure of benefits accruing from the Bhoomi initiative, and are to be related to estimates of costs available with the World Bank.



Profile of respondents

The profile of respondents (in Table 1 below) indicates the diversity of users of land records. A larger proportion of the Bhoomi sample respondents were from households where the Chief Wage Earners were illiterate.

Table 1: Educational background of respondents

Education: Chief wage Earner	Control (% respondents)	Bhoomi (% respondents)
Illiterate	8.5	21.2
Informally literate	3.4	1.2
Upto Primary	37.3	27.6
Upto SSLC	25.4	28.2
Upto PUC	11.9	9.4
Graduate	11.9	9.4
Diploma / ITI	1.7	1.2
Post Graduate and above	-	1.8

Users of Bhoomi kiosks became aware of this facility from different sources of information (details in Table 2). Only 39% of the control sample was aware of Bhoomi kiosks. Given that sample was drawn from persons who visited the taluk office for RTCs, the lack of awareness in the control group, also speaks in part for gaps in awareness about Bhoomi among the population at large. Most of the respondents in both control (53%) and Bhoomi (64%) learnt about the Bhoomi project from the village accountant. A smaller proportion of respondents (16% in the control group and 26% in the Bhoomi group) reported awareness through friends and neighbours. A small proportion of respondents reported learning about Bhoomi from newspapers and magazines.

Table 2: Source of awareness of Bhoomi kiosks

Source of awareness	Control (% respondents)	Bhoomi (% respondents)
Friend/neighbour/acquaintance	15.8	25.8
Village accountant/any other revenue departmental official	52.6	64.1
Government publication	5.3	0.5
Newspaper/magazine	5.3	6.1
Visit to a taluk office where bhoomi kiosk is operational	21.1	2.5
Others		1.0

Most of the Bhoomi users had visited the kiosks to get a RTC. Only a very small proportion (2%) had sought to merely view the documents. This proportion was small because touch screen kiosks were available only in 2 of the 12 offices where the survey was carried out. The modified RTC is a more complex document. This is prepared when a property is sold or transmitted to another person or heir. Therefore, the process calls for a notice to be placed at the village office for 30 days after applying for the change, before the mutation is executed. Although mutations are a small proportion of the normal transactions (less than 5%), this sample was purposively augmented to assess any variation in service standards, on account of the complexity of the task, and the potential for malpractice.



Table 3: Type of information/document obtained by Bhoomi users

Document needed - Obtained	Bhoomi (% respondents)
RTC (normal)	78.3
Modified RTC (involving mutation)	17.2
Copy of the mutation order	4.5
Others	-

The users of Bhoomi kiosks made the visits for a variety of reasons. The largest proportion of users approached Bhoomi centers to obtain RTCs for applying for loans.

Table 4: Purpose for which RTC/document sought

Purpose for which document was obtained	Normal RTC	Modified RTC
Requesting corrections in the RTC	7.9	18.6
Applying for a loan	51.3	25.6
Verifying the mutation	7.9	30.2
Verifying the ownership of property	6.6	11.6
Verifying the details of adjoining property	6.9	7.0
Producing the document in the court	7.9	4.7
Only to possess	23.0	25.0
Others	17.1	9.3

Benefits enjoyed by users of Bhoomi kiosks:

The Bhoomi kiosks were set up to benefit a large number of rural land owners in Karnataka. This section provides details on benefits to users of Bhoomi kiosks.

Ease in the use of the Bhoomi kiosks: The debate on the digital divide has often raised this question of awareness and skills among users, and their ability to access and benefit from information technology enabled processes. In spite of the IT enabled nature of this service, most users of the Bhoomi system (80%) found the system to be very simple. Many of the Bhoomi users (68%) had also made use of the manual system in the past in contrast to users of the manual system (44%). Only 9% of the users of Bhoomi kiosks found the process difficult.

Table 5: Degree of difficulty of procedure

Degree of difficulty	Control (% respondents)	Bhoomi (% respondents)
Very simple	44.1	80.3
Simple	-	9.6
A bit difficult	40.7	1.5
Very difficult	15.3	8.6



The ease with which the Bhoomi kiosks were used is reinforced with the feedback regarding assistance required by users to utilize the facility. Feedback from the users indicates that the Bhoomi kiosks were utilized by most users (69%) with little or no help, in contrast with the manual system (25%).

Table 6: Extent to which assistance required to complete formalities

Extent of assistance	Bhoomi (% respondents)	Control (% respondents)
Yes, some help	27.2	47.5
Yes, a lot of help	3.6	27.1
None at all	69.2	25.4

Speed of service was relatively better at the Bhoomi kiosks, according to feedback from users. A large proportion of users (42%) were able to get the service at Bhoomi kiosks in less than 10 minutes, as compared to the manual system (27%). All the same, feedback indicates that one in four users (23.7%) have to wait for a significant period in the queue (more than 30 minutes), but this is better than the experience of those using the manual system (37.3%). The weighted average time spent in queues in the manual system was 27 minutes as against 21 minutes.

Table 7: Time spent at the counter

Time spent at the counter	Control (% respondents)	Bhoomi (% respondents)
<=10 minutes	27.1	42.4
11 - 30 minutes	35.6	33.9
31 - 60 minutes	25.4	12.1
More than 60 minutes	11.9	11.6

Complexity of procedures: Government offices have elaborate procedures involving many levels of officials to maintain land records in a secure manner. The multiplicity of layers of officialdom that a citizen had to encounter was seen as a major problem. Feedback from the users indicate that the Bhoomi kiosks were utilized by most users (78%) without having to meet any official except the counter staff. This is in strong contrast to none of the control respondents being able to utilize Bhoomi kiosks by meeting just the Bhoomi staff. 19% had to meet one official, in the case of the manual system. The extent of complexity is reflected in the fact that 61% of the users of the manual system had to meet two to four officials for their work.

Table 8: Number of officials met

No. of officials met	Control (% respondents)	Bhoomi (% respondents) Other than Bhoomi staff
1	18.6	13.1
2 -4	61.0	7.6
5 -7	18.6	0.6
> 7	1.7	0.5
None	-	78.3



Legacies of the manual system have not completely faded away. About 18% of Bhoomi users reported that the appointed village accountant, operating the kiosk, was not the person who signed the document.

Errors in documents received: The manual procedures had significant implications on the integrity of documents, and the possibility of errors coming out of indifference of the staff. Although the Bhoomi database is yet to be completely checked, it seems to be much better in providing error free documents. User feedback indicates that Bhoomi kiosks provided error free documents to more users (74%), in contrast with 62%, in the case of the manual system.

Among those reporting errors, wrongly spelt names were the most frequent error (81% in case of manual system, and 53% in the Bhoomi system). However, major errors in land details were the issue for 31% of those who reported errors in the manual system, in contrast with 4% in case of Bhoomi users.

Table 10: Type of errors in documents generated

Type of errors found (base those finding errors)	Control (% respondents)	Bhoomi (% respondents)
Wrong entry of name / address / other particulars	81.3	53.2
Misspelling of name / address / other particulars	18.8	19.1
Minor error in entry of land details (eg. Size, type, etc)	93.8	21.3
Major error in entry of land details (size, type etc)	31.3	4.3
Others		2.1

Rectification of errors: Given that errors are not unusual at this stage of development of the Bhoomi system, how efficient are the response systems? Almost all users of the Bhoomi system had confidence to complain about the system and sought rectification (93%) as compared to less than half (49%) in the manual system.

Timely response is a critical part of service delivery. Half the complainants (58%) got timely response in case of Bhoomi, while such response was reported by only 4% of those using the manual system.

Table 11: Institutional response to complaints

Response to complaints	Control (% respondents)	Bhoomi (% respondents)
Complaint not heard / official did not give time	25.0	8.9
Complain heard, no action taken	25.0	8.9
Action was taken; delayed	46.4	22.2
Action was taken; timely	3.6	57.8
Others	-	2.2

Cost of service: All users of the Bhoomi facility who wish to receive a hard copy of the RTC are to pay a fee of Rs. 15/- each and receive a receipt for the same. While this is a new charge levied by the government, it is meant to hold the person providing the service accountable for proper completion of the task. This is largely adhered to (95%), and excess payment reported by only a small proportion of users (5%). A receipt is supposed to issued when the money is received. But, a large segment of users (66%) reported that they did not get (collect?) a receipt for the payment they made.



Table 12: Amount paid to get an RTC

Amount paid to get RTC (Rs.)	Bhoomi (% respondents)
Less than 15	0.0
15	93.4
20	0.0
25	3.0
Greater than 25	1.5

Hidden costs: Citizens also incur hidden costs of time and effort to secure these land documents. Most Bhoomi users (42%) reported a minimal waiting time in the queue of 10 minutes or less, in contrast with 27% of the manual system who had to wait an equivalent time. Around 12% of the Bhoomi users waited more than an hour, as did users of the manual system.

Table 13: Time spent at the counter

Time spent at the counter	Control (% respondents)	Bhoomi (% respondents)
<=10 mins	27.1	42.4
11 - 30 mins	35.6	33.9
31 - 60 mins	25.4	12.1
More than 60mins	11.9	11.6

A bigger issue is the number of visits a citizen makes to these offices to get the RTC. Most got the RTC (72%) with one visit to the Bhoomi kiosk, but only 5% did so with the manual system.

Table 14: Number of times returned from bhoomi centre/office without job done

Number of times returned without job done	Control (% respondents)	Bhoomi (% respondents)
Almost always	10.2	3.8
Half of the time	25.4	10.6
Sometimes	28.8	2.3
Rarely	30.5	11.4
Never	5.1	72.0

The most serious issue is that of corruption and bribery. Two thirds of the users of the manual system paid a bribe - 66% of them reported having to do so very often. In contrast, only 3% of the users of the Bhoomi system reported paying bribes.

Table 15: Incidence of paying bribe

Paid bribe	Control (% respondents)	Bhoomi (% respondents)
Yes	66.1	3.0
No	33.9	97.0



The sample of respondents who paid bribes in the course of using the Bhoomi facility is very small, and inadequate to make valid projections. All the same, it provides a basis for estimating the benefit for users of Bhoomi kiosks. What is significant here is that almost all users (95%) who went through the complex activity of getting a modified RTC after mutation did not pay a bribe. With the exception of the odd person who paid over Rs. 1000 for a normal RTC, the average bribe paid was Rs. 103 among the small proportion (3%) of Bhoomi users as against Rs. 231 each paid by 66% users of the manual system.

Table 16: Quantum of bribe

Amount paid as bribe (Rs.)	Control (% of respondents who paid bribe)	Bhoomi (% of respondents who paid bribe)
<= 50	10.3	16.7
51 to 100	20.5	16.7
101 to 200	25.6	33.3
201 to 500	33.3	16.7
500 to 1000	7.7	-
More than 1000	2.6	16.7

Staff behaviour: While technical capacity of the system plays an important role in its success, the approach of people who handle the task is of critical significance too. Most Bhoomi users (85%) rated staff behaviour at the Bhoomi kiosks as 'good'; none of the users of the manual system rated the staff as 'good' but many users (63%) of the manual system rated staff behaviour as "average".

Table 17: Rating of behaviour of staff

Rating	Control (% respondents)	Bhoomi (% Respondents)
Good	-	84.8
Average	62.7	14.6
Bad	37.3	0.5

Overall Assessment of benefits

The benefits accruing to the Bhoomi user are of two kinds:

- Tangible benefits, in terms of man days saved on repeat visits and amount spent on bribes
- Intangible benefits, in terms of shorter queues, lesser number of officials to be met, error free documents, timely response to complaints and better staff behaviour

Tangible benefits: The comparative assessment of number of visits made indicates that Bhoomi kiosks have significantly reduced the time that users spend on getting land documents. A weighted average of the number of visits made for obtaining an RTC works out to 1.33 for the manual system and 1.11 for the Bhoomi kiosks. It implies that about one fourth of the users are able to save an extra visit, on aggregate terms. Given that about 500,000 people use the Bhoomi system per month, the benefit in terms of man days saved is approximately 110,000 man days per month, and 1.32 million man days per annum. The benefit of wages from the man days saved, at the most basic level, is at least Rs. 50 per day (almost \$1 per day), which translates into Rs. 66 million per annum.



The bigger saving for citizens is on bribes they pay in the manual system. The weighted average value of bribe paid in the manual system was Rs. 152.46 per person, while that in Bhoomi was Rs. 3.09. This means that the shift to Bhoomi offers users a potential saving of Rs. 149.37. Even if we reduce the saving by the fee that they have to pay, of Rs. 15, the net saving is Rs. 134.37. This translates to a saving of over Rs. 806 million in a year.

Intangible benefits: The users of Bhoomi also benefit from shorter durations spent in queues to get documents. The weighted average time spent in queues in the manual system was 27 minutes as against 21 minutes.

Bhoomi kiosk users also had to meet lesser number of officials (weighted average of 1.43) when compared to users of the manual system (3.25). Similar benefits also accrued to Bhoomi users on timely response to complaints (58%) vis a vis users of the manual system (3.6%). A large proportion of Bhoomi users (85%) rated staff behaviour as good while none of the users of the manual system rated staff behaviour as good (63% rated it average).



Annexure 1: List of taluk offices covered in the survey

Control Group

District	Taluk
Udipi	Udipi
Uttar Kannada	Ankola
Belgaum	Gokak
Bangalore Rural	Channapatna

Bhoomi Group

District	Taluk
Bijapur	Sindagi Basavana Bagewadi
Koppal	Kushtagi Gangavathi
Udipi	Kundapur Karkala
Hassan	Sakleshpur Arkalgud
Mandya	Maddur Nagamangala
Chamrajnagar	Yelandur Gundelpet