

# Rural Access Index: A Key Development Indicator



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## **Executive Summary**

This paper describes the Rural Access Index (RAI), a headline transport indicator which highlights the critical role of access and mobility in reducing poverty in poor countries. The Index is part of the Results Measurement System for IDA 14. It is defined together with the official method of measurement which is on the basis of locally representative household surveys.

Current estimates of the Index indicate that some 900 million rural dwellers world wide do not have adequate access to the formal transport system. Initial values for more than 30 IDA countries show the overall level of access for their rural population to be 57 percent. Within the IDA group access is worst for the Sub-Saharan Africa countries for which the average RAI is 30 percent. For a selection of non-IDA countries the average value of access is nearly 90 percent.

The preferred measurement of RAI is from household survey results. A draft transport questionnaire module is proposed for new household surveys with estimates of the relatively modest resources required to establish and update the measurement. Alternative methods of measurement and estimating techniques are described in case there is no ready prospect of undertaking a suitable household survey.

The challenges for extending and updating the Index are described, together with the resources which have been developed to tackle these. Links are provided to those resources.

# Rural Access Index: A Key Development Indicator

## 1 Introduction

### 1.1 Purpose of the Rural Access Index

Bangladesh Government emphasizes the importance of rural infrastructure development in rural areas. Bangladesh Transport sector infrastructure development is not equally and widely distributed in all districts. In order to maintain nonbiased development, it has to be identified a key diagnostic measures which have particular significant for the sector in contributing to the wider development process. These are considered to be headline transport indicators.

This paper describes the establishment of the Rural Access Index, one of several Transport Headline Indicators endorsed by the World Bank Transport Sector Board in 2003. The index has been adopted for the Results Measurement System (RMS)<sup>1</sup> of the 14th round of the International Development Association (IDA-14) which was launched in July, 2005. The Index was developed in Transport Sector Coordination Wing (TSC) led by renowned transport policy specialist Dr. Sion Haworth that it identifies an important priority for poverty reduction strategies in view of the established links between physical isolation and poverty. This provides stronger linkage to the Millennium Development Goals (MDG) and better assesses the contribution of IDA assistance to the sustainable development of the beneficiary countries.

### 1.2 Definition and Importance of Access

“Accessibility” and “Mobility” are two terms that are often used in transport planning processes, but sometimes

confusion is created by the way these terms are used. Mobility refers to the ease with which a person can move about. It relates to the person’s physical fitness, availability of different modes of transport, and the resources available to the person concerned (Jones, 1975). Mobility is also dependent on the individual’s other personal attributes (e.g. a mother with young children would be considered less mobile than a woman without small children).

On the other hand accessibility is defined as the opportunity that an individual or type of person at any given location possesses to take part in a particular activity or a set of activities (Jones, 1981). The concept of access has been applied to regional and rural planning for some years now and a considerable body of literature exists on this subject. It is widely accepted that accessibility has three elements:

- the location of the individual
- the location of the supply, service or facility to which the individual needs access
- the link to bring the two together

The objective of bringing the individual to the location of the supply, service or facility to which the individual needs access can be achieved by: (i) moving the individual physically to the facility (mobility of the individual); (ii) taking the facility closer to the individual (relocation of the facility); and (iii) a combination of (i) and (ii) which reduces physical movement of the individual and the use of the transport system. Therefore, any interventions to improve access involve one or more of the above.

The Rural Access Index provides a consistent basis for estimating the proportion of the rural population which has adequate access to the transport system. It can help to inform policies and strategies which ensure that the rewards of

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<sup>1</sup> The RMS involves measuring a set of indicators, which captures key aspects of the development of 81 countries which receive IDA concessional assistance (IDA, 2004).

development are distributed more equitably to the rural population.

### 1.3 Poverty and Isolation

Physical isolation is a strong contributor to poverty. Populations without reliable access to social and economic services are poorer than those with reliable access. Problems of access are particularly severe in those rural areas which are distant from roads that carry motorized transport services on a regular basis. Roughly 80 percent populations are rural dwellers of Bangladesh (BBS, 2005). On the basis of current values of RAI it is estimated that about 100 million rural dwellers in Bangladesh, are without reliable transport access. The large majority of these people are poor as defined for the MDGs. The lack of reliable transport systems in Bangladesh, mainly in rural areas, has compelled household members to spend significant time traveling in order to meet basic needs. Usually this time burden is distributed inequitably within the household. In this case, women were

particularly overburdened, taking responsibility for about 80 percent of the time cost.

It is generally accepted that isolation is one of the key causes of poverty. However, a reduction of isolation (i.e. improvement of access) will not necessarily contribute directly to poverty reduction as poverty has many dimensions and lack of access is just one of them. Making a provision to improve access to basic facilities and services (e.g. health, water, sanitation etc.) in subsistence economies will only provide a foundation for development. Improvements of access to the wider economic and socio-economic facilities (e.g. markets) will play a catalytic role in the poverty reduction process.

Table 1-1 identifies the key items to which rural people require access including the factors that are directly and indirectly related to the access (I. T. Transport, 1999). Edmonds (1998) discusses this issue more elaborately.

**Table 1-1: Access and Poverty**

	<b>Factors Related to Access</b>	<b>Other Factors</b>
Employment	Physical Access to job location Lack of Transport Services	Lack of job opportunities
Land	Distance/Time to fields	Size of Holdings Cultivable Land Population Density
Technology		Not Known Not Understood Expensive Not Available
Information	No Radio No Telephone Poor Postal Services	Lack of Extension works
Credit	Location of Credit Facility	Poor Banking Services Strict Credit Regulations
Health Service	Lack of Health Centres Poor Access Lack of Transport Services	Limited Personnel Lack of Medicine
Water	Lack of Irrigation	Distance of Supply Lack of wells

	<b>Factors Related to Access</b>	<b>Other Factors</b>
Energy	Limited Electricity	Distance to Source
Market	Poor Transport Facilities Poor Location	Poor Marketing System
Transport	Poor Transport Services Lack of Roads Limited Number of Vehicles	
Education	Location of Education Institution Lack of Access	Lack of Efficient Teachers Limited Educational Tools

#### **1.4 Rural Access Index and MDG**

Transport is not specifically identified in Millennium Development Goal targets, but it makes key contributions to achieving many of the Goals—underpinning pro-poor growth and improving social inclusion. Surveys show that poor people recognize isolation as a major contributor to their poverty and marginalization. In practice, improving access to transport for rural men and women in low income countries like Bangladesh is considered essential to promote rural development, to increase uptake of human development services (educational and health), to facilitate inclusion of different ethnic and other groups, to improve employment opportunities, and to stimulate growth for poverty reduction. The rapid introduction of the highway network did play a part, but the much shorter lengths of rural roads (Zila, Upazila, Union and village) made an even more important contribution to growth and poverty reduction, achieving about four times greater benefit/cost ratio than did the highways. Improved transport contributes not only through enabling better access to services and opportunities, but also by lowering the transport costs incurred in delivering and/or accessing such services and opportunities.

#### **1.5 Equity and Development**

The Rural Access Index also helps to address the issue of equity which is an increasing focus of the international development community. The World Development Report (World Bank 2005) explores the relationship between equity

and development strategy and makes the issue of equity central to “poverty-reducing” development. A previous World Development Report points out that the affordable access to services is especially low in many of the poorest countries, with poor people needing to travel much further to reach basic services such as health and education, than richer people in the same country (World Bank 2003) As an example, the rural children from the poorest access to transport need to travel more than five times farther than the children in the richest access to reach the nearest primary school and health centers.

#### **1.6 Impacts of Rural Access**

Change in rural access has differing impacts on various sections of the population. In particular, the socioeconomic impact of increased access differs by gender, by age groups, by different caste/ethnic groups, and by income. For example, improved access potentially increases men’s migration, and may result to increased workload on women in the farm and household. Similarly improved motor access brings consumption goods nearer to households, but affects rural artisans and those residents whose livelihoods depend upon portering. For policy makers, this underlines that transport interventions often need to be coupled with complementary policies if all socially and economically disadvantaged households are also to reap the benefits of improved access.

## 1.7 Conceptual Shifts

The Rural Access Index helps to address the issues mentioned above by changing the way the outputs of investment in the rural transport sector are measured. The shift in the form of measurement is threefold—what to measure, where to measure and how to define what is being measured. The indicators which have been generally used to report progress in the transport sector have been based on characteristics of the road network such as the length or density of different categories of roads (paved and gravel roads, urban, feeder roads and national highways, etc). Such measures do not give a clear picture of the transport access level available to the rural population since they do not relate the provision of transport facilities to the location of the target population. Thus the first important conceptual shift has been to measure the accessibility of the target population to the road network, rather than simply some aspect of network size.

Corresponding to this has been the second conceptual shift, which is in the measurement units used to study the impacts of changes in transport infrastructure. Thus, rather than focusing on an administrative unit and assuming that all households within the unit have the same level of access to the transport network, the definition of RAI enables more detailed measurement - that is, at the household level. This approach can capture how access to transport services relates to household characteristics.

The third shift is that the definition of the index provides a common international basis for understanding rural access as it relates to transport. However, detailed interpretation of the RAI for any country must be set in the local context.

Further, by providing information on rural residents' differential access to the all-season road network, the RAI helps planners to devise policies and programs to meet specific rural access objectives.

RAI thus provides an objective basis for governments to set transport sector goals, and to establish investment priorities for improving rural access.

## 1.8 Definition of RAI

In practice the RAI measures the number of rural people who live within two kilometers (typically equivalent to a walk of 20-25 minutes) of an all-season road as a proportion of the total rural population. An "all-season road" is a road that is motorable all year round by the prevailing means of rural transport (typically a pick-up or a truck which does not have four-wheel-drive). Occasional interruptions of short duration during inclement weather (e.g. heavy rainfall) are accepted, particularly on lightly trafficked roads.

Some sections of the population (the elderly, the disabled or those carrying heavy burdens) may find that even distances of less than one kilometer present a significant barrier to access, particularly under extreme conditions of terrain or climate. On the other hand, in many remote situations (such as the hills of Rangamati and Bandarban or remote areas of rural area of Bangladesh) people may be accustomed to walking many kilometers in order to reach formal transport services. Alternatively they may manage without using such transport at all. The choice of two kilometers as the defining distance for 'adequate access' is a compromise between these extremes. This establishes a consistent definition of the Index, enabling comparison and aggregation (on the basis of population weight) of the values for target populations.

The specific emphasis given to roads in the definition of the index reflects the importance of road transport for improving rural access for the great majority of rural people in most low income countries. In these situations where another mode, such as water transport is dominant the definition can be modified to reflect that.

If this is done, then the fact should be explicitly recorded against the resulting RAI value.

## 2 Rural Access Index

### 2.1 Values and Aggregates

Results for 6 divisions<sup>2</sup> of the countries show that on average **57 percent** of rural dwellers has access to the transport network. The graph also shows a significant difference between the RAI and poverty. For ten non-IDA countries (for which suitable household survey results are available) the RAI value is much higher at 93 percent (Figure 2-1).

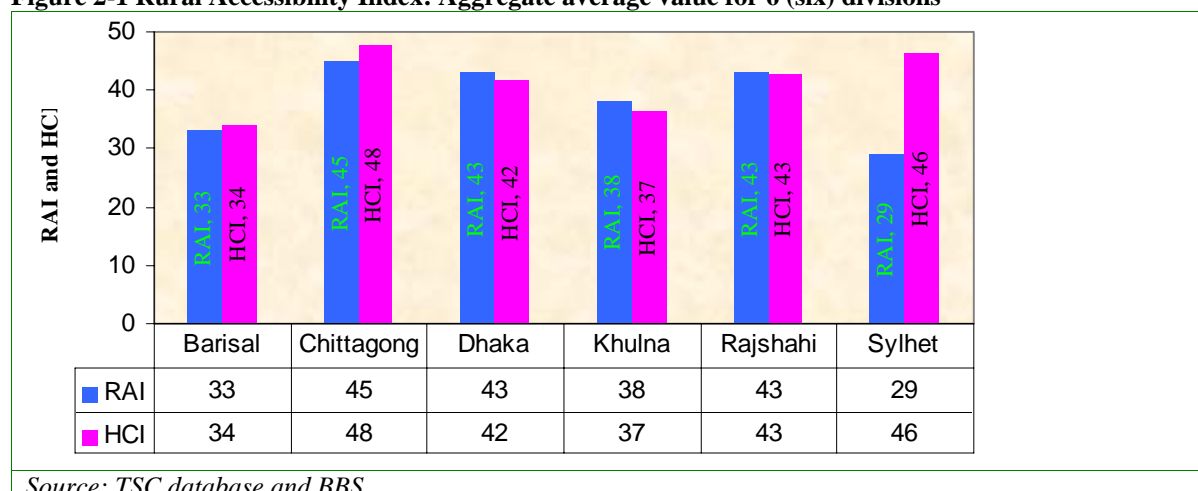
The Rural Access Index is designed to respond to borrowers' priorities and to be measurable for a 'critical mass' of IDA countries. In establishing this indicator, therefore, priority has been given to the countries with the highest populations so that the 32 countries for which RAI has been established represent 88 percent of the total rural population of IDA countries. Priority has also been given to those countries with the larger land areas for which rural access is likely to be particularly relevant. A two page summary of the RAI is presented in Annex I, and the current, endorsed values of Rural Access Index by country, showing the source and year of survey with the current rural population are given in Annex II.

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<sup>2</sup> Dhaka, Chittagong, Rajshahi, Khulna, Sylhet and Barisal.



**Figure 2-1 Rural Accessibility Index: Aggregate average value for 6 (six) divisions**



## 2.2 Sensitivity to Change

The RAI is designed to capture changes in rural access as a result of development in the transport sector. Relatively small improvements in access to an all-season road have marked impacts in terms of improving the overall indicator results. However, to date there are only a few countries for which we have for more than one set of household data results to determine in detail how the RAI changes over time. This reflects the development activity which responded to the government's priority. Limited time series data from BBS shows slower rates of change. However, relatively small improvements in access to an all-season road have marked impacts in terms of improving the overall indicator results.

## 2.3 Measurement and Reporting

There are two main approaches to the measurement of this index, by using:

- (a) household surveys that include information about access to transport, or
- (b) map data to determine how many people live within the specified catchments of the road network.

Including appropriate questions in a broader survey of households is usually the most informative and cost-effective way of obtaining information on rural access. The RAIs have been measured

using the results of Household Expenditure and Income Surveys (HIES), 2005 accomplished by BBS. These surveys are designed to produce high-quality data and be representative for the main segments of population (thus, the 'rural population' is adequately covered). Updates of the index will essentially depend on the frequency of HIES surveys. These are usually expected to be carried out on a three-year cycle. A time series data will be established in the country.

## 2.4 Application of the Rural Access Index

Currently the primary application of the Index is as a component of the IMED, Planning Commission Bangladesh, particularly based on TSGD on the lines described above. Various countries are also extending the application of the Index in different ways. In Vietnam the index is being updated every two years on the basis of data from the Vietnam Living Standards Survey. The VLSS is representative at the Provincial level so the index provides a basis for comparing the degree of rural accessibility enjoyed by the rural population in each province. Procedures are being examined for using the Rural Access index together with the Poverty Rate for allocating central government resources between provinces in response to the national Comprehensive Poverty Reduction and Growth Strategy. As a

headline transport indicator the Rural Access Index also has significance at both the national and the wider Regional level. The Africa Transport Ministers prepared a Declaration in 2005 showing the key targets, such as improving rural accessibility and urban mobility, for the transport sector to contribute to achieving the Millennium Development Goals.

## 2.5 Rural Access Index (RAI) value

RAIs values are calculated in GIS software based on the criterion given in the definition. The values are calculated for every administrative districts of Bangladesh, shown in Table 2-1. In the table it has given by division wise with ranking.

**Table 2-1 Rural Access Index by District**

District	Total Population	Rural Population with Access	Rural Population without Access	Rural Access Indicator	Ranking
Barguna	848554	241540	607014	28	53
Barisal	2355967	581414	1774553	26	56
Bhola	1703117	558282	1144835	33	40
Jhalakati	694231	379023	315208	59	6
Patuakhali	1460781	296024	1164757	21	59
Pirojpur	1111068	434518	676550	40	26
<b>Barisal Division</b>	<b>8173718</b>	<b>2490801</b>	<b>5682917</b>	<b>33</b>	<b>5</b>
Bandarban	298120	34313	263807	12	62
Brahmanbaria	2398254	696159	1702095	30	51
Chandpur	2271229	1039523	1231706	49	13
Chittagong	6612140	1999037	4613103	42	49
Comilla	4595557	2524702	2070855	58	4
Cox Bazar	1773709	571540	1202169	34	43
Feni	1240384	247867	992517	19	60
Khagrachhari	525664	132986	392678	27	55
Lakshmipur	1489901	892466	597435	64	1
Noakhali	2577244	1124799	1452445	46	15
Rangamati	508182	28283	479899	5	64
<b>Chittagong Division</b>	<b>24290384</b>	<b>9291674</b>	<b>14998710</b>	<b>45</b>	<b>1</b>
Dhaka	8511228	1160256	7350972	69	2
Faridpur	1756470	671630	1084840	40	29
Gazipur	2031891	869879	1162012	51	17
Gopalganj	1165273	458978	706295	40	24
Jamalpur	2107209	709063	1398146	35	36
Kishoreganj	2594954	629038	1965916	25	57
Madaripur	1146349	337647	808702	29	50
Manikganj	1285080	425228	859852	33	39
Munshiganj	1293972	707577	586395	58	5
Mymensingh	4489726	1880564	2609162	43	18
Narayanganj	2173948	1109983	1063965	61	10
Narsingdi	1895984	1013338	882646	59	7
Netrokona	1988188	464271	1523917	24	58
Rajbari	951906	368203	583703	41	27
Shariatpur	1082300	426108	656192	42	25
Sherpur	1279542	533144	746398	44	20
Tangail	3290696	1009056	2281640	31	48
<b>Dhaka Division</b>	<b>39044716</b>	<b>12773962</b>	<b>26270754</b>	<b>43</b>	<b>2</b>
Bagerhat	1549031	418593	1130438	29	54
Chuadanga	1007130	335772	671358	35	38

District	Total Population	Rural Population with Access	Rural Population without Access	Rural Access Indicator	Ranking
Jessore	2471554	763902	1707652	33	47
Jhenaidaha	1579490	758835	820655	53	11
Khulna	2378971	361682	2017289	21	61
Kushtia	1740155	596021	1144134	36	34
Magura	824311	435234	389077	57	8
Meherpur	591436	265911	325525	47	14
Narail	698447	289004	409443	42	21
Satkhira	1864704	534422	1330282	29	52
<b>Khulna Division</b>	<b>14705229</b>	<b>4759377</b>	<b>9945852</b>	<b>38</b>	<b>4</b>
Bogra	3013056	1393433	1619623	50	12
Dinajpur	2642850	1041362	1601488	43	23
Gaibandha	2138181	774646	1363535	37	31
Joypurhat	846696	481702	364994	63	3
Kurigram	1792073	581248	1210825	33	41
Lalmonirhat	1109343	462906	646437	44	19
Naogaon	2391355	820390	1570965	36	33
Natore	1521336	663810	857526	47	16
Nawabganj	1425322	460175	965147	35	42
Nilphamari	1571690	551613	1020077	37	32
Pabna	2176270	834791	1341479	42	28
Panchagarh	836196	281122	555074	34	37
Rajshahi	2286874	1172969	1113905	57	9
Rangpur	2542441	943760	1598681	41	30
Sirajganj	2693814	1063111	1630703	42	22
Thakurgaon	1214376	380137	834239	32	45
<b>Rajshahi Division</b>	<b>30201873</b>	<b>11907174</b>	<b>18294699</b>	<b>43</b>	<b>2</b>
Habiganj	1757665	548512	1209153	32	46
Maulvibazar	1612374	517702	1094672	33	44
Sunamganj	2013738	207800	1805938	9	63
Sylhet	2555566	867247	1688319	37	35
<b>Sylhet Division</b>	<b>7939343</b>	<b>2141260</b>	<b>5798083</b>	<b>29</b>	<b>6</b>
<b>Bangladesh</b>	<b>124355263</b>	<b>43364248</b>	<b>80991015</b>	<b>41</b>	

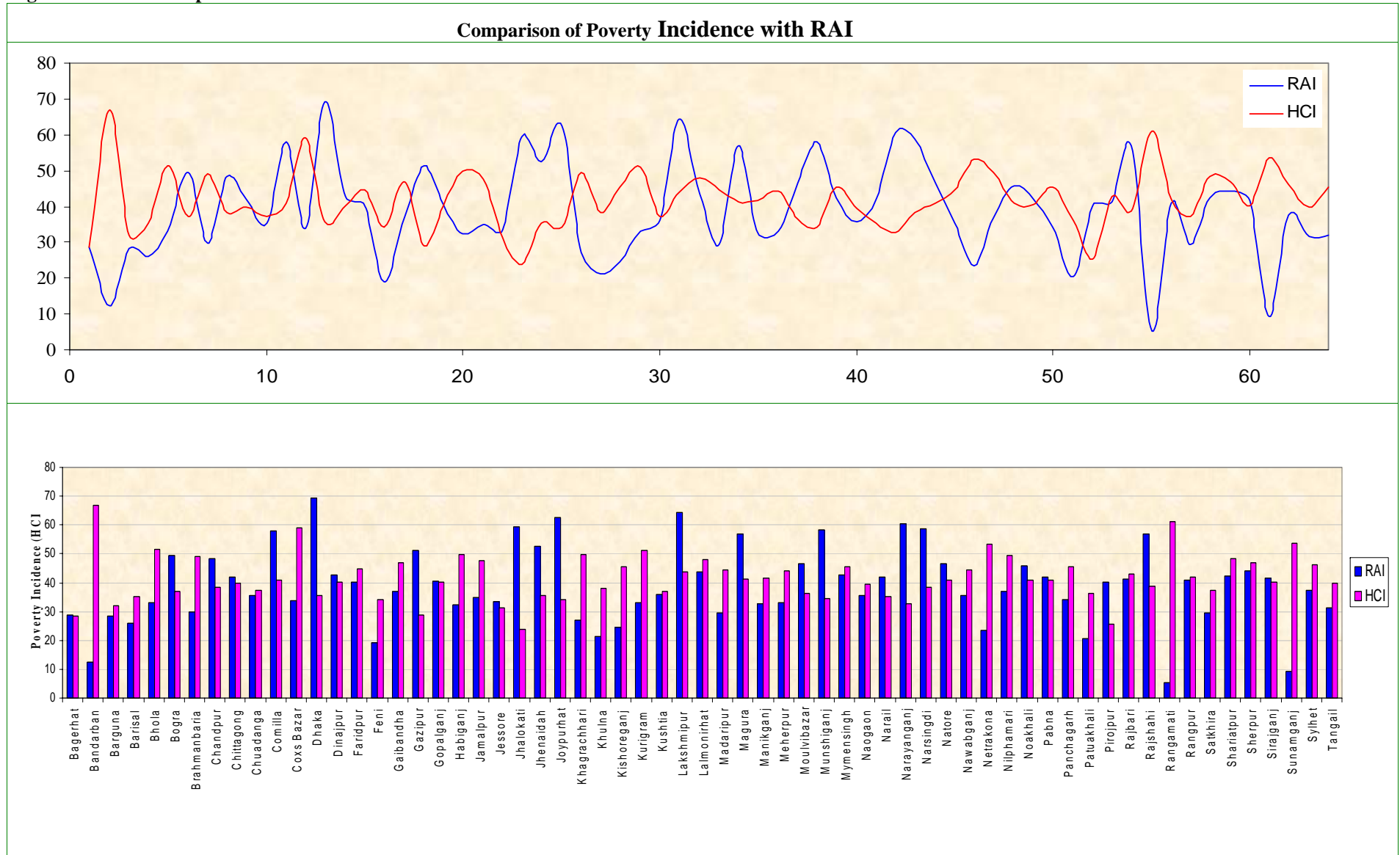
Source: Bangladesh Bureau of Statistics (BBS).

## 2.6 Relationship between RAI and Poverty

It is evident from these observations that there is considerable inequality in the level of access amongst the different districts and a large portion of rural people are excluded from the opportunity of accessibility. Less accessible are poorer than the people who have relatively more access to the transport system. Head count index (HCI), one of the measures of the

poverty, shown against the RAI in Figure 2-2. access to the transport system. Head count index (HCI), one of the measures of the poverty, shown against the RAI in Figure 2-2. From figure it has observed that there is inverse relationship with RAI with HCI, i.e. if RAI poses low value due poor access that leads people to poverty and if RAI increases due to substantial access to transport system that leads people to live better than those.

**Figure 2-2 Relationship of RAI with HCI**



## 2.7 Accessibility Mapping

This is a simplified version of a full GIS-based measure. The map is prepared by overlaying the road map on the topographical country map. Obstacles in the form of hills and rivers, necessary relief for contour and detour distance for river crossings were taken into consideration. Thus was calculated the percentage of population having accessibility to nearest allweather road in terms of walking time. Based on this procedure, it was estimated for 2008 that on average 41 percent of the overall population had access to the nearest all-season road within 30 minutes. The RAI is measured on the basis of the definition given above for every administrative districts area. In whole calculation stage there are some steps:

Step 1: identify the 2 km buffer area on both side of an allweather road in GIS.

Step 2: using the buffer area clip the demographic coverage.

Step 3: from clipping area calculate the number of population fall within the buffer area.

Step 4: calculate RAI using the formula

$$RAI = \frac{NoofRuralPeoplewithAccess}{TotalPopulation} \times 100$$

Then the RAI value has been visualized in GIS map using graduated color to quick felling of the user for understanding the gravity of RAI in Figure 2-3.

## 2.8 Application of the Rural Access Index

Currently the primary application of the Index is as a component of the Transport Results Measurement System on the lines described above. Various countries are

also extending the application of the Index in different ways. In Vietnam the index is being updated every two years on the basis of data from the Vietnam Living Standards Survey. The index provides a basis for comparing the degree of rural accessibility enjoyed by the rural population in the country. Procedures are being examined for using the Rural Access index together with the Poverty Rate for allocating government resources between administrative areas in response to the national Comprehensive Poverty Reduction and Growth Strategy.

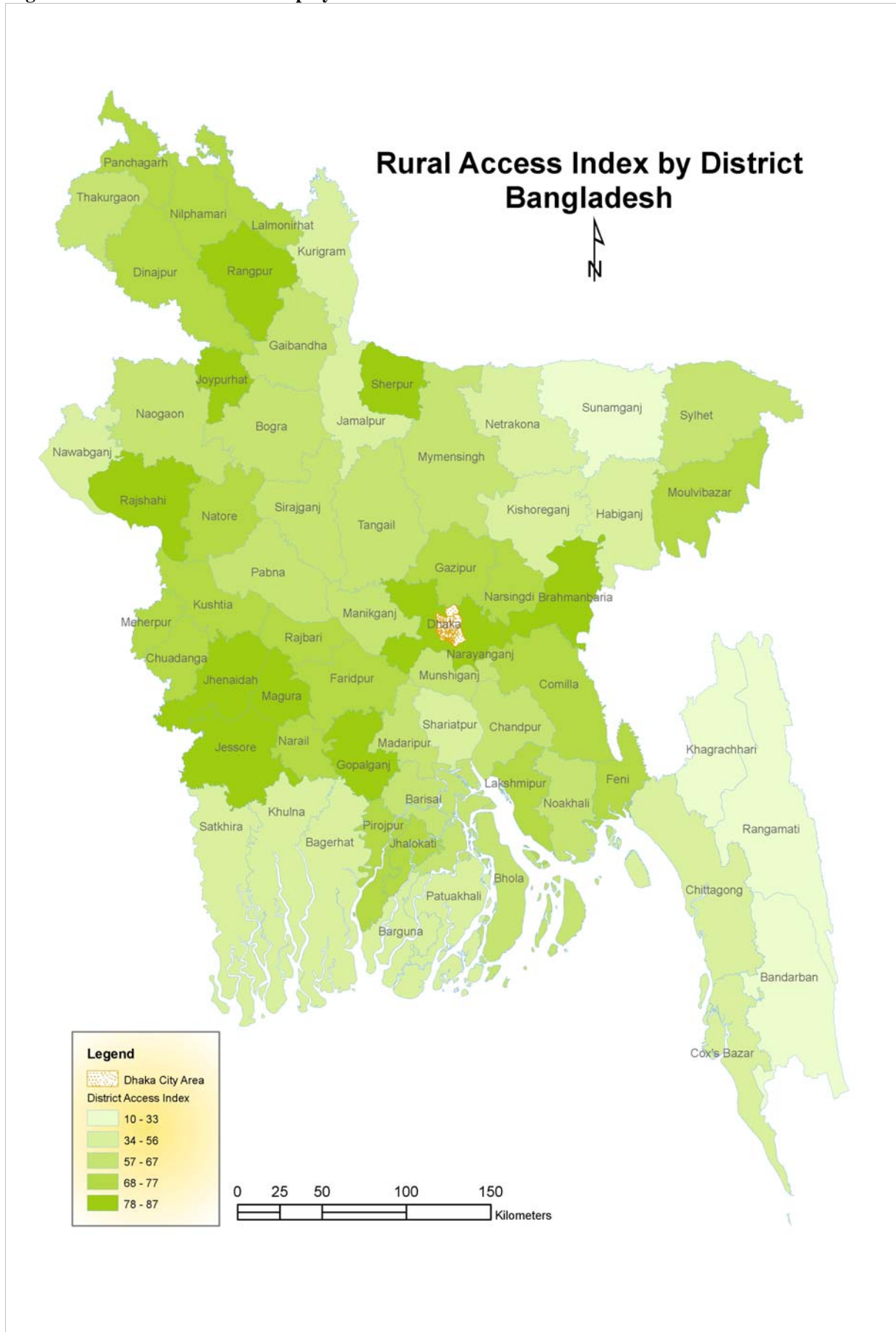
As a headline transport indicator the Rural Access Index also has significance at both the national and the wider Regional level. The Government of Bangladesh emphasized showing the key targets, such as improving rural accessibility and urban mobility, for the transport sector to contribute to achieving the Millennium Development Goals.

## 2.9 Rural Access Target

The Rural Access Index should be used, together with other headline transport indicators to strengthen the relationship between the Millennium Development Goals and the broad response of the Transport in Bangladesh. This is set out in a report prepared for a meeting of the Bangladesh Transport System and is summarized in the Table 2-2 which is reproduced in Annex VI. The headline indicators constitute high level targets for the transport sector which link the direct interventions of the sector to their significant impacts on the MDGs.

The Table shows that, for Bangladesh, improvement in rural access is a key requirement for achieving a number of the Goals in particular: halving poverty and hunger, increasing access to education (especially for girls), reducing maternal mortality and improving child health.

**Figure 2-3 Rural Access Index Map by District**



**Table 2-2 Transport Targets and Indicators Related to the Millennium Development Goals (MDGs)**

MDG	Targets	Indicators
MDG 1 Eradication of extreme poverty and hunger.	Access to inputs and markets, and generation of employment opportunities, improved by <b>halving the proportion of rural population living beyond 2 km of an all-season road</b>	Proportion of rural population within 2 km of an all season road % Reduction of travel and vehicle turnaround time % Increased productivity in agriculture and economic activities % Increase in employment opportunities and income generation from transport related activities
	The difference in average <b>transport cost</b> between Africa and Asia narrowed down by 50%	% Reduction in passenger fares (passenger kilometer) % Reduction in unit goods transport cost (ton kilometer) Level of affordability of transport cost by the urban and rural poor % Increase in the use of intermediate means of transport (IMT) Existence of sustainable financing mechanisms like Road Funds... % Increase in the proportion of roads in good and fair condition
MDG 2 + 3 Universal primary education and gender equality	<b>Rural access and urban mobility</b> improved to eliminate constraints on the time which all children have to participate in education and to enable effective education to be delivered and reached safely	% of schools which have reliable access % of households which report constraints on education due to: Lack of girls time for school Difficulty (cost) of access Poor quality of education service Lack of safe access to school
MDG 4 + 5 Child Health and Maternal Mortality	<b>Rural access and urban mobility</b> improved for reliable supply of inputs to health facilities, to provide affordable access for all households and to enable cost effective outreach health activities	% Health centers, clinics etc with reliable rural access. % of households reporting constraints on access to health services because of: Distance Cost / difficulty of travel Poor quality health service Unit cost immunization / capita Unit cost / coverage of outreach services / capita
	<b>Emergency transport response</b> for medical crisis in rural communities improved through community communications facilities linked to improved transport services	% Emergency patients unable to reach health care in time: Expectant or postnatal mothers Children under 5 years
MDG 6 HIV/AIDS, malaria and other diseases	Ensure <b>transport sector ceases to be an agent for spreading HIV/AIDS</b>	HIV/AIDS Prevalence among transport sector workers (public and private) HIV/AIDS prevalence rate in transport affected communities Inter-country coordination of actions relating to AIDS in transport sector
	Rate of <b>road accident fatalities</b> reduced by half by 2015	Rate of fatality (per million vehicles-km) Number of countries adopting road safety strategies
MDG 7 Environmental sustainability	Share of urban residents for whom <b>mobility</b> problems severely constrain access to employment and essential services halved	% of households (in the various urban living environments) which report transport costs and time as major obstacles to employment
		% of households which report access as a major obstacle for essential services
	<b>Environmental sustainability</b> promoted in all transport operations and development	Environmental impact identified by audits of programs undertaken



MDG	Targets	Indicators
	programs	
	Production of <b>leaded petrol</b> ceased by 2010	Number of countries banning sale of leaded petrol
<b>MDG 8</b> Global partnership for development	<b>Transport cost</b> for landlocked countries reduced by half and their access to global markets improved, all TAH missing links completed and existing portions of regional transport corridors maintained by 2015	Percentage reduction of missing links of the Trans-African Highways (TAH) network and transit corridors. % reduction in transport cost for landlocked countries
	All non-physical transport barriers that increase <b>journey time</b> , customs clearance, border delay and impede the flow of goods and services dismantled by 2015	Proportion of countries that have reduced checkpoints along their main transit corridors to a maximum of 3 (between port and border of landlocked country). Proportion of countries that have reduced their border crossing time to OECD average. Proportion of countries that have reduced their port clearing time to OECD average.
	<b>Axle load limits</b> , Check VDF	Proportion of RECs with harmonized axle load limits Proportion of RECs with harmonized standards for vehicles Proportion of RECs that have harmonized road design standards
	Air transport services improved <b>fares reduced</b> , and <b>movement of goods and services</b> facilitated in all countries by 2015	Number of new connections between African countries established. Number of products and volume of traffic of products transported by air. Percentage reduction in air transport fares.

### 3 Conclusion

Now the primary challenge is for countries to mainstream and sustain the Rural Access Index in routine monitoring at the national levels. To attain the MDG goals transport is indispensable and can act as pivotal role as Bangladesh Government is committed to fulfill the targets by 2015. Govt. should priorities the development

plan giving preference to the less access people to remove the inequality. Transport Coordination wing (TSC), in planning commission is ready to assist such activity through the Transport Results Initiative. Specialists supporting country programs or their partners may make contact through the planning commission, Physical Infrastructure Division or directly with the Transport Results Initiative ([transport-status@plancomm.bd.org](mailto:transport-status@plancomm.bd.org)).



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