Rural livelihood options for youth from agricultural households

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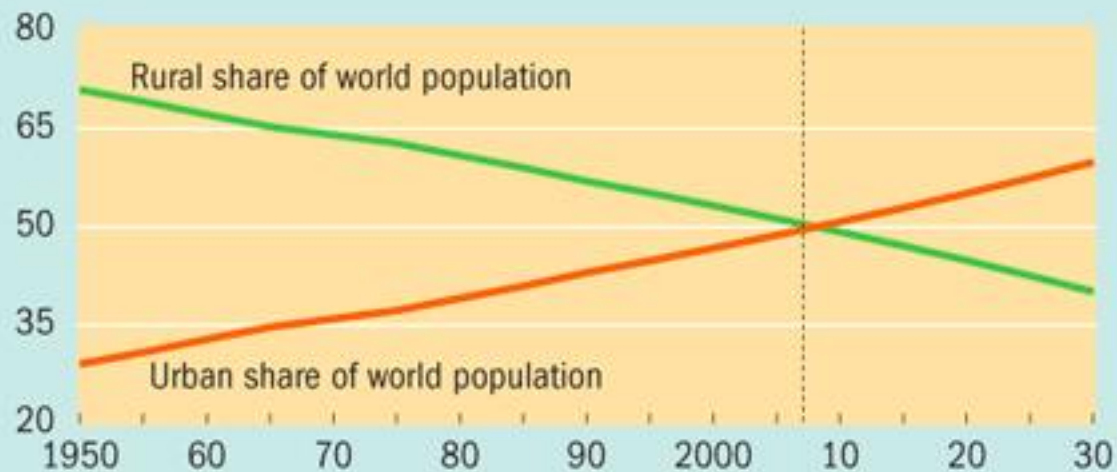
UNIVERSITY OF CAMBRIDGE

Chart 1
Tipping the scale
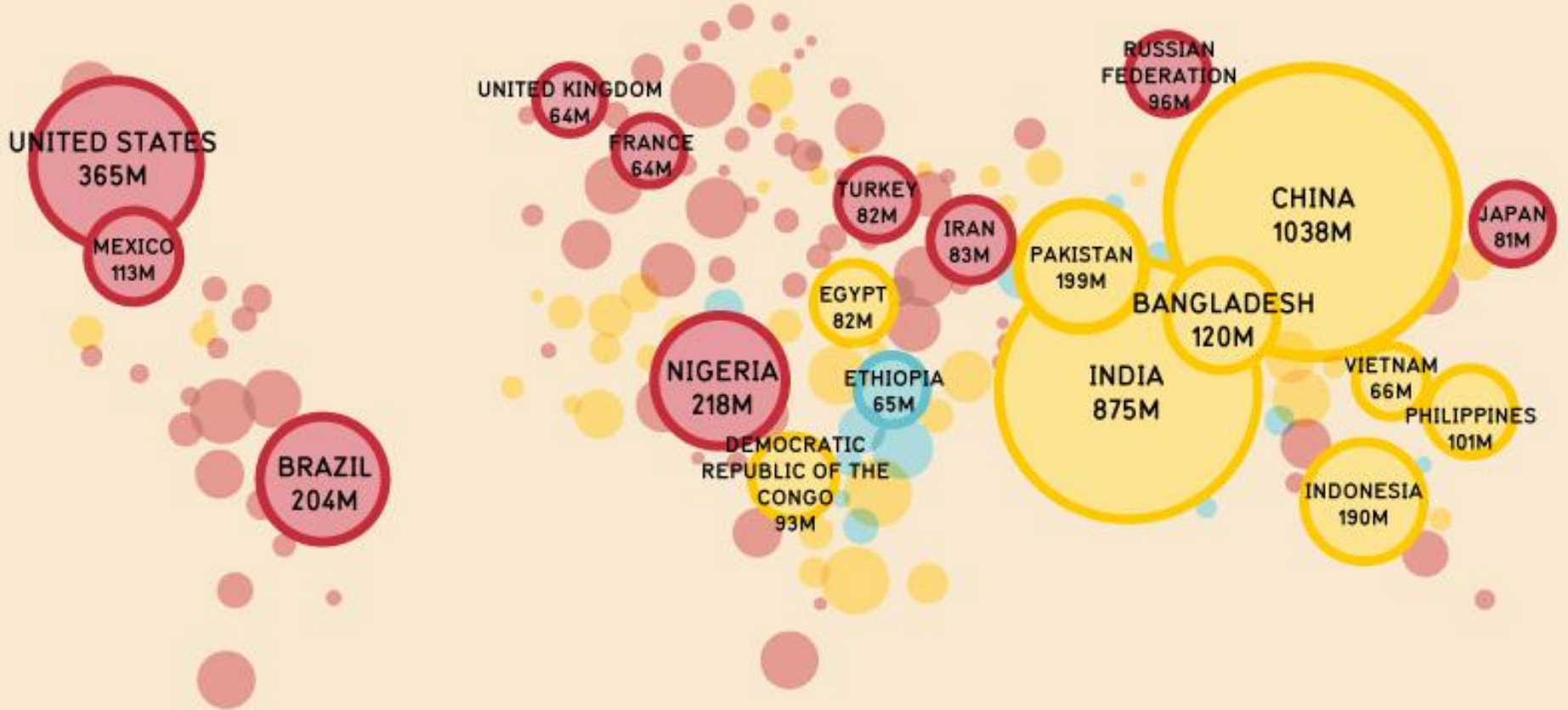Next year, for the first time in history, more people will be living in urban than in rural areas.
(percent)

Rural share of world population

Urban share of world population

"AN URBAN WORLD"–UNICEF
COUNTRIES AND TERRITORIES WITH URBAN POPULATIONS EXCEEDING 100,000 IN 2050

CIRCLES SCALED TO URBAN POPULATION SIZE
COLOR REFLECTS % OF PEOPLE LIVING IN CITIES AND TOWNS

>75%   50% – 75%   25% – 50%

UNITED STATES
365M

MEXICO
113M

BRAZIL
204M

UNITED KINGDOM
64M

FRANCE
64M

NIGERIA
218M

DEMOCRATIC
REPUBLIC OF THE
CONGO
93M

ETHIOPIA
65M

TURKEY
82M

EGYPT
82M

IRAN
83M

RUSSIAN
FEDERATION
96M

PAKISTAN
199M

CHINA
1038M

BANGLADESH
120M

INDIA
875M

JAPAN
81M

VIETNAM
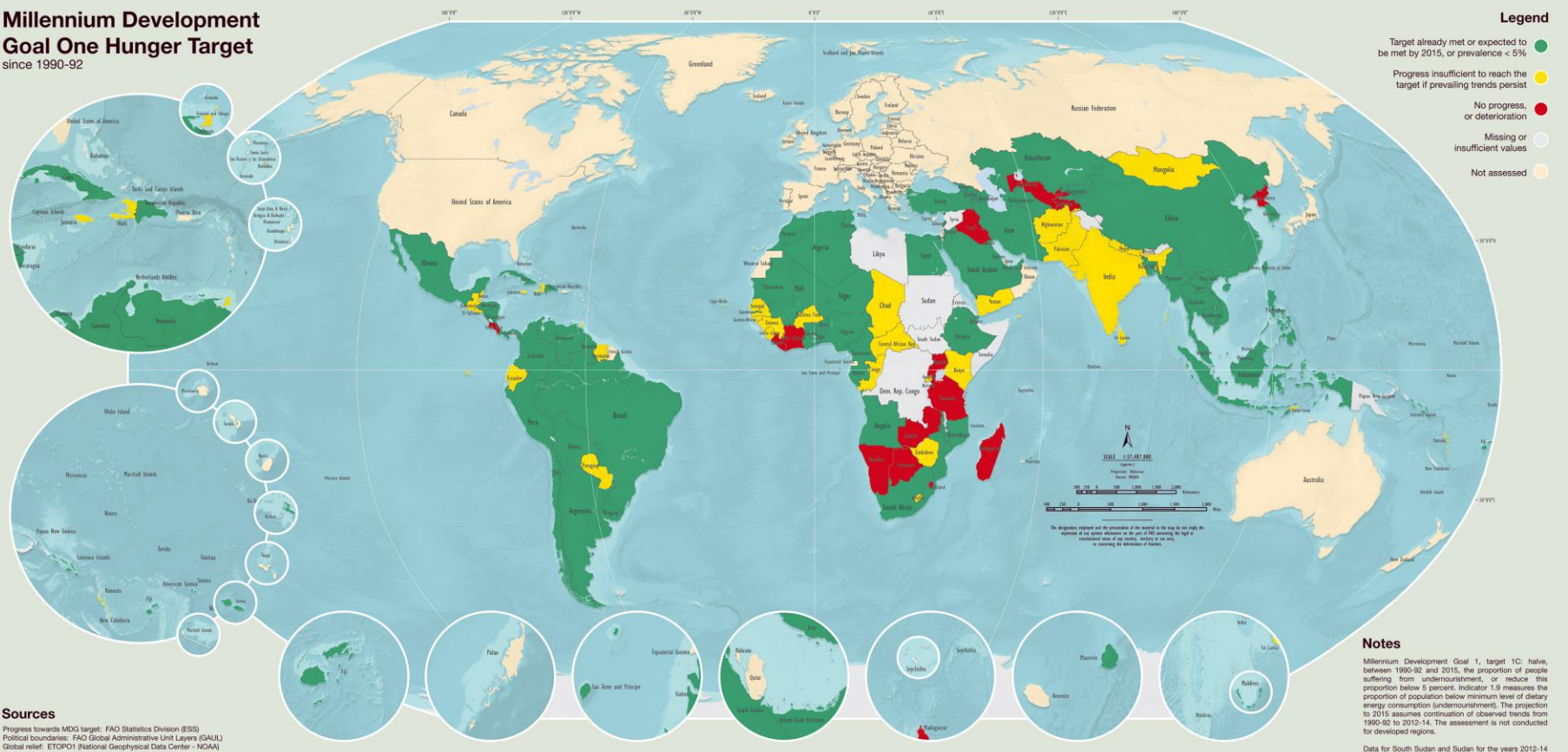66M

PHILIPPINES
101M

INDONESIA
190M

FAO
HUNGER
MAP
2014

- About 805 million people – one in nine of the world's population – were chronically undernourished in 2012–14, with insufficient food for an active and healthy life. This number has fallen by 100 million over the last decade, and by 209 million since 1990–92.

- The vast majority of hungry people live in developing countries, which saw a 42 percent reduction in the share of undernourished people between 1990–92 and 2012–14. Despite this progress, 13.5 percent of the overall population, or about one in eight, remain chronically undernourished in these countries, down from 23.4 percent in 1990–92.

- 63 developing countries have already met the MDG1 hunger target while 25 have reached the more stringent 1996 World Food Summit target of halving the number of undernourished persons by 2015.

- The MDG 1c hunger target – of halving, by 2015, the proportion of undernourished people in the developing world – is within reach, but only with sufficiently accelerated progress.

- Large regional differences remain. Latin America and South-Eastern Asia have been the most successful subregions, while Western Asia is the only one to actually regress. Sub-Saharan Africa, with almost one in four chronically hungry, has more than a quarter of the world's undernourished people. Southern Asia, with over half a billion, has the highest number of the chronically hungry.

For additional information please visit:
http://www.fao.org/economic/ess

Millennium Development
Goal One Hunger Target
since 1990-92

Legend

- Target already met or expected to be met by 2015, or prevalence < 5%
- Progress insufficient to reach the target if prevailing trends persist
- No progress, or deterioration
- Missing or insufficient values
- Not assessed

SCALE 1:57,487,000

Notes

Millennium Development Goal 1, target 1C: halve, between 1990-92 and 2015, the proportion of people suffering from undernourishment, or reduce this proportion below 5 percent. Indicator 1.9 measures the proportion of population below minimum level of dietary energy consumption (undernourishment). The projection to 2015 assumes continuation of observed trends from 1990-92 to 2012-14. The assessment is not conducted for developed regions.

Data for South Sudan and Sudan for the years 2012-14 are not reliable and are not reported.

Global Reports on Gaps between Education, Skills and Employment

- the inability of educational institutions to provide youth with the skills that are necessary to gain employment
- the problems of matching educational levels to available jobs
- youth are dissatisfied with the education that is being provided by educational establishments
- '*too cool to school*' and '*too poor to study*'

Road Work: Creating a better highway from education to employment

Schooling and Social Mobility

- Young people want jobs when they complete the secondary cycle

- Schooling is not a sufficient condition for ensuring that individuals exit poverty

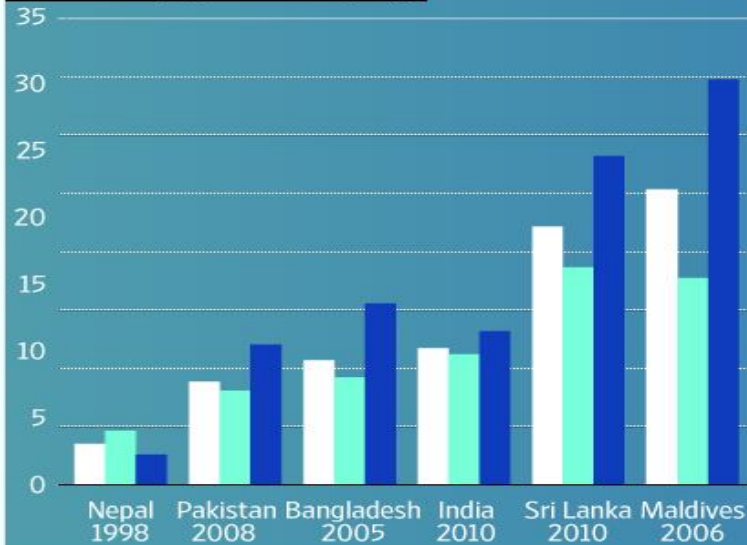- Formal sector employment difficult to come by, poor educated youth get jobs in the informal sector
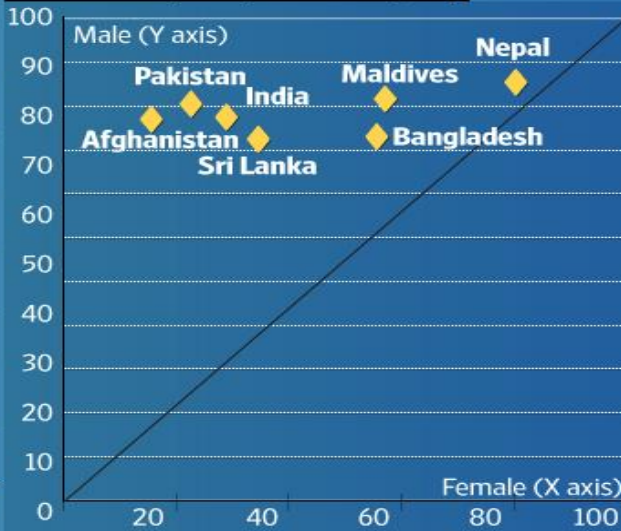
ILO, 2014

JOBLESS RATES

Due to cultural attitudes and social norms about women in the work-place, most South Asian countries exhibit very low rates of female labour force participation.

■ Total   ■ Male   ■ Female

Youth unemployment rates (in %)

Nepal 1998 · Pakistan 2008 · Bangladesh 2005 · India 2010 · Sri Lanka 2010 · Maldives 2006

Labour force participation rates (in %)

Male (Y axis)

Nepal · Pakistan · Maldives · India · Afghanistan · Bangladesh · Sri Lanka

Female (X axis)

Unemployment rates by level of education

Sri Lanka

13.7 · 5.5

Below O-level · O-level · A-level and above

India

34.5 · 18.9

Illiterate · Primary · Higher Secondary · Graduate · Tech Degree · Dip below grad · Dip above grad

Source: ILO's Global Employment Trends 2013 report
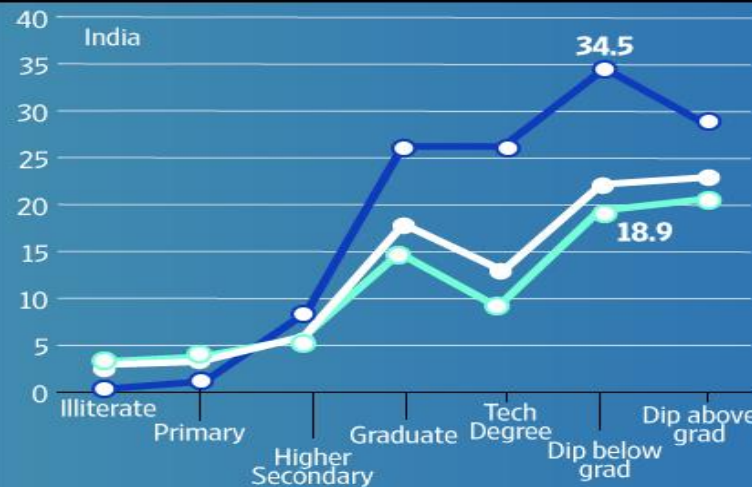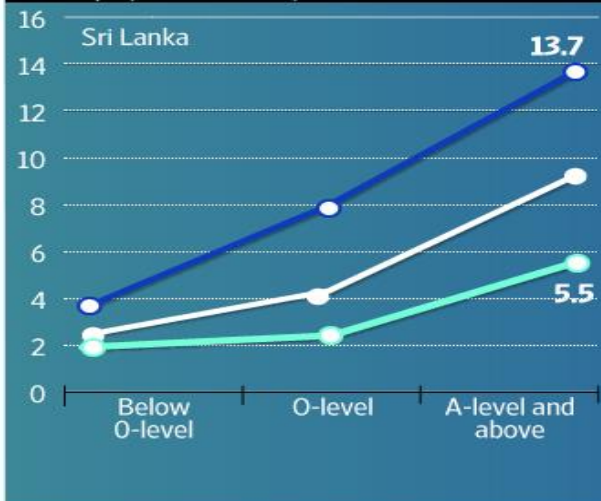
Rural connectivity in India

- Cost-effective wireless Internet technologies beginning to evolve and could connect 200 to 400 villages in each taluka.
- Using the fibre bandwidth from BSNL and CorDECT Wireless in Local Loop technology to provide such connectivity.
- Using Wireless Technology required a lot of learning- From erection of towers for the base stations and Relay base stations, to making sure that connectivity survived heavy rains
- ensuring that the power was up at each of the villages all the time, was quite a tough work. Handling lightening was probably one of the most difficult tasks.

Digital Natives (15 to 24-year-olds) as percentage of total population

Canada **11.9%**

USA **13.1%**

Iceland **13.9%**

Norway **12.3%**

Russia **6.3%**

Spain **8.3%**

Algeria **4.1%**

Egypt **6.6%**

Saudi Arabia **10.4%**

India **1.8%**

China **5.6%**

Chile **11.3%**

Brazil **10.8%**

Argentina **8.6%**

South Africa **3.6%**

East Timor **0.1%**

Australia **11.4%**
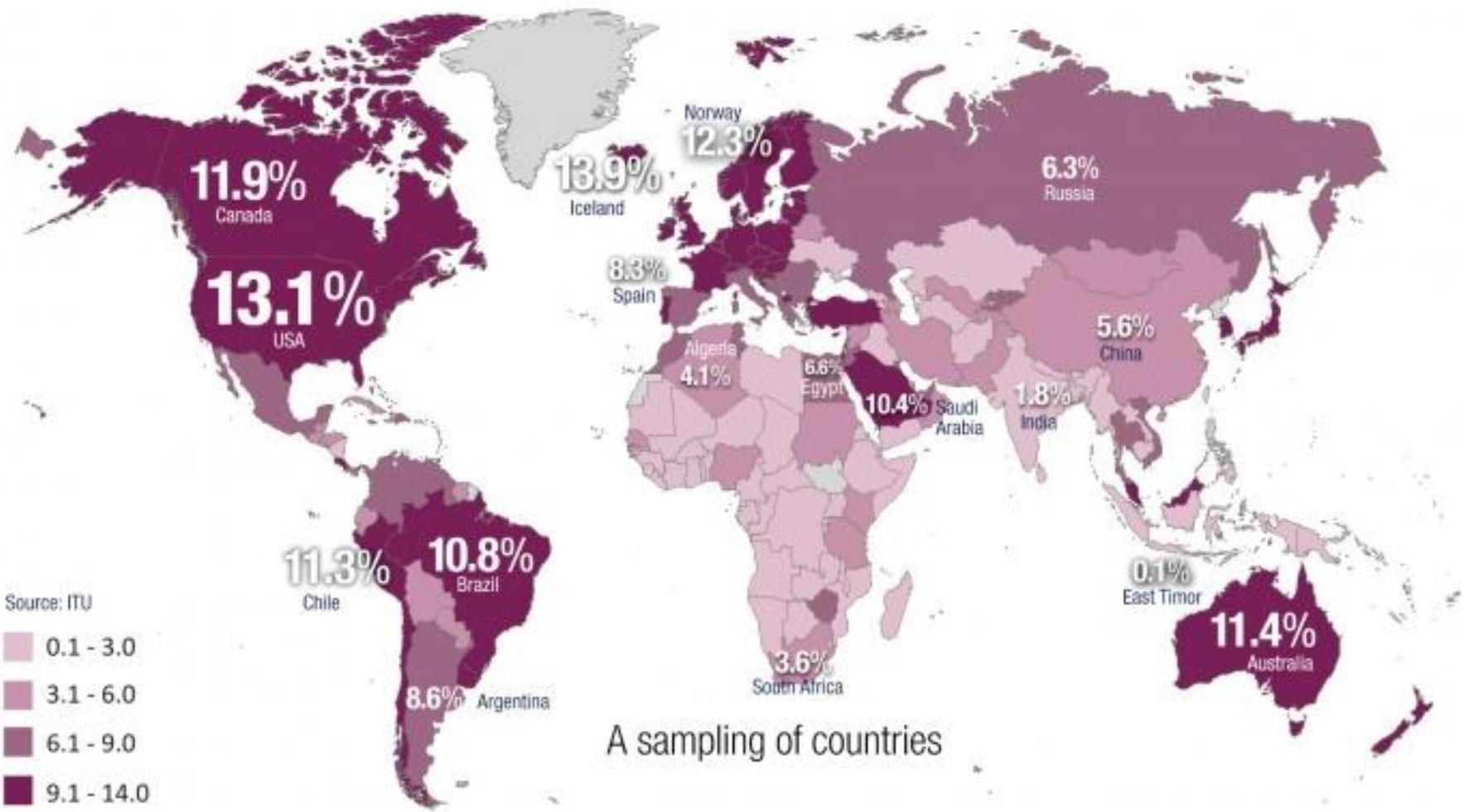
Source: ITU

- 0.1 - 3.0
- 3.1 - 6.0
- 6.1 - 9.0
- 9.1 - 14.0

A sampling of countries

Tamil Nadu

Tiruvallur

Chennai

Vellore

Kancheepuram

Tiruvannamalai

Dharmapuri

Villupuram

Salem

Cuddalore

Nilgiris

Erode

Namakkal

Perambalur

Ariyalur

Coimbatore

Tiruchirappalli

Karur

Thanjavur

Nagapattinam

Tiruvarur

Dindigul

Pudukkottai

Theni

Madurai

Sivaganga

Virudhunagar

Ramanathapuram

Thoothukudi

Tirunelveli

Kanyakumari
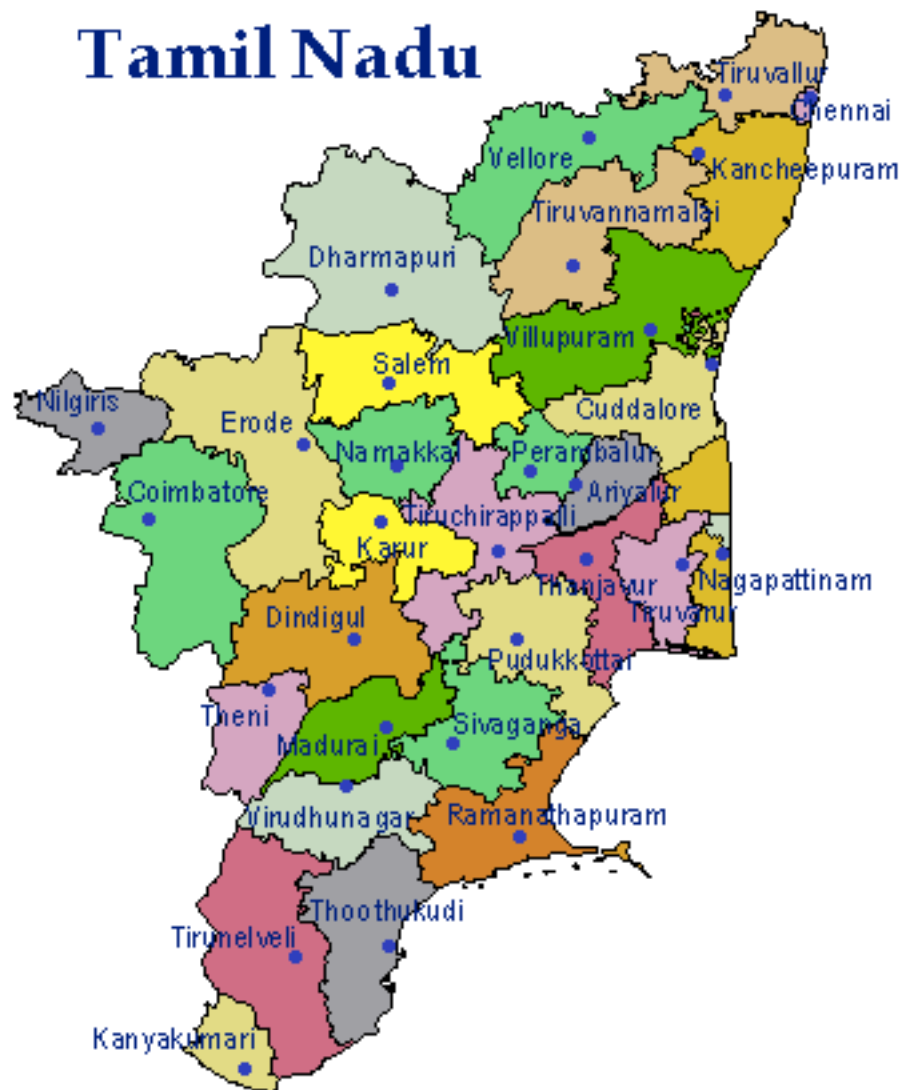
The Experiment

- Uses smartphones as a mobile measuring device to learn how rural households access technology

- This is done through a crowdsourcing-based system: Portolan -Androids' Application developed at University of Pisa and the Institute of the Italian National Research Council

- The application will have agricultural data available for download and is provided by our Indian partner (IIT Madras)

- We will use the data to conduct choice experiments on relative costs acceptable/not acceptable to households

Mobile Phones Providers and Upstream data

- Uses smartphones as mobile measuring elements to reconstruct providers topology.
- A crowdsourcing-based system: Portolan, an Android Application developed by University of Pisa and the Institute of the Italian National Research Council
- Traces the physical movement of SIM cards using a GIS system

Data from the experiment

- Portolan sends a traceroute to discover all the available paths between the IP source and the target destination.

- The application also provides a Maximum Throughput Estimation that can be achieved along an Internet path.

- GSM/UMTS Coverage and signal strength along the path.

- The results can be seen on Google Maps.

A crowdsourcing approach to mapping the Internet


Portolan smartphones: distribution map
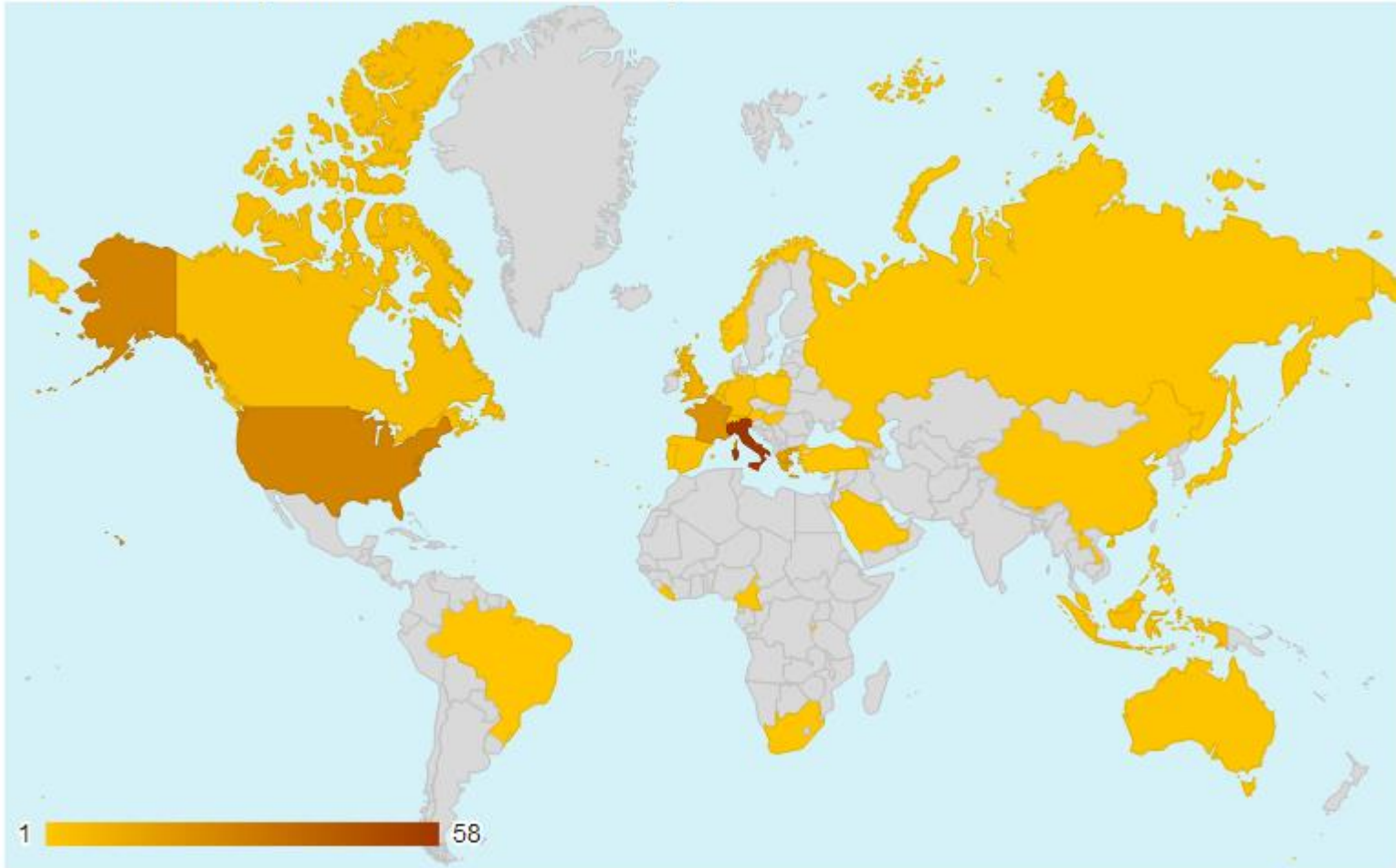
Rural institutions and downstream data

- The mapping of rural households that captures the ways in which they make a living
- the resources that enable them to make a living
- The costs and choices that influence their ability to manage resources, and
- the institutional and policy context that either helps or hinders their efforts to make a living

Connectivity and youth education and employment choices

- An 'app' to allow free download of data on local educational institutions- fees for course, employment statistics after completion

- 'App' provides data download, by text and by broadband

- Data for downloads collected by IIT RTBI team from educational experts in Chennai

-67	23	80.2271366666667	Aircel Chennai	13.0096583333333	3.6	GSM CID11931LAC801MCC404MNC41
-71	21	80.22379027	404 84	13.01130844	16	GSM CID10753LAC50028MCC404MNC84
-67	23	80.2270216666667	Aircel Chennai	13.0097133333333	3.6	GSM CID11931LAC801MCC404MNC41
-67	23	80.22377143	404 84	13.01118408	15	GSM CID10753LAC50028MCC404MNC84
-67	23	80.2268983333333	Aircel Chennai	13.0097716666667	3.7	GSM CID11931LAC801MCC404MNC41
-67	23	80.22368942	404 84	13.01125597	15	GSM CID10753LAC50028MCC404MNC84
-67	23	80.22677	Aircel Chennai	13.0098383333333	3.7	GSM CID11931LAC801MCC404MNC41
-65	24	80.22356971	404 84	13.01133494	15	GSM CID10753LAC50028MCC404MNC84
-67	23	80.2266433333333	Aircel Chennai	13.009905	3.7	GSM CID11931LAC801MCC404MNC41
-65	24	80.22347718	404 84	13.0114259	15	GSM CID10753LAC50028MCC404MNC84
-67	23	80.2265116666667	Aircel Chennai	13.0099716666667	3.8	GSM CID11931LAC801MCC404MNC41
-69	22	80.2263833333333	Aircel Chennai	13.0100316666667	3.8	GSM CID11931LAC801MCC404MNC41
-65	24	80.2233787	404 84	13.01130011	15	GSM CID10753LAC50028MCC404MNC84
-69	22	80.2262583333333	Aircel Chennai	13.0100933333333	3.9	GSM CID11931LAC801MCC404MNC41
-65	24	80.22328169	404 84	13.01136563	14	GSM CID10753LAC50028MCC404MNC84
-69	22	80.2261366666667	Aircel Chennai	13.01015	4	GSM CID11931LAC801MCC404MNC41
-69	22	80.2260166666667	Aircel Chennai	13.0102066666667	4.1	GSM CID11931LAC801MCC404MNC41
-71	21	80.22310103	404 84	13.01137138	15	GSM CID10753LAC50028MCC404MNC84
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-69	22	80.2257883333333	Aircel Chennai	13.0103183333333	4.2	GSM CID11931LAC801MCC404MNC41
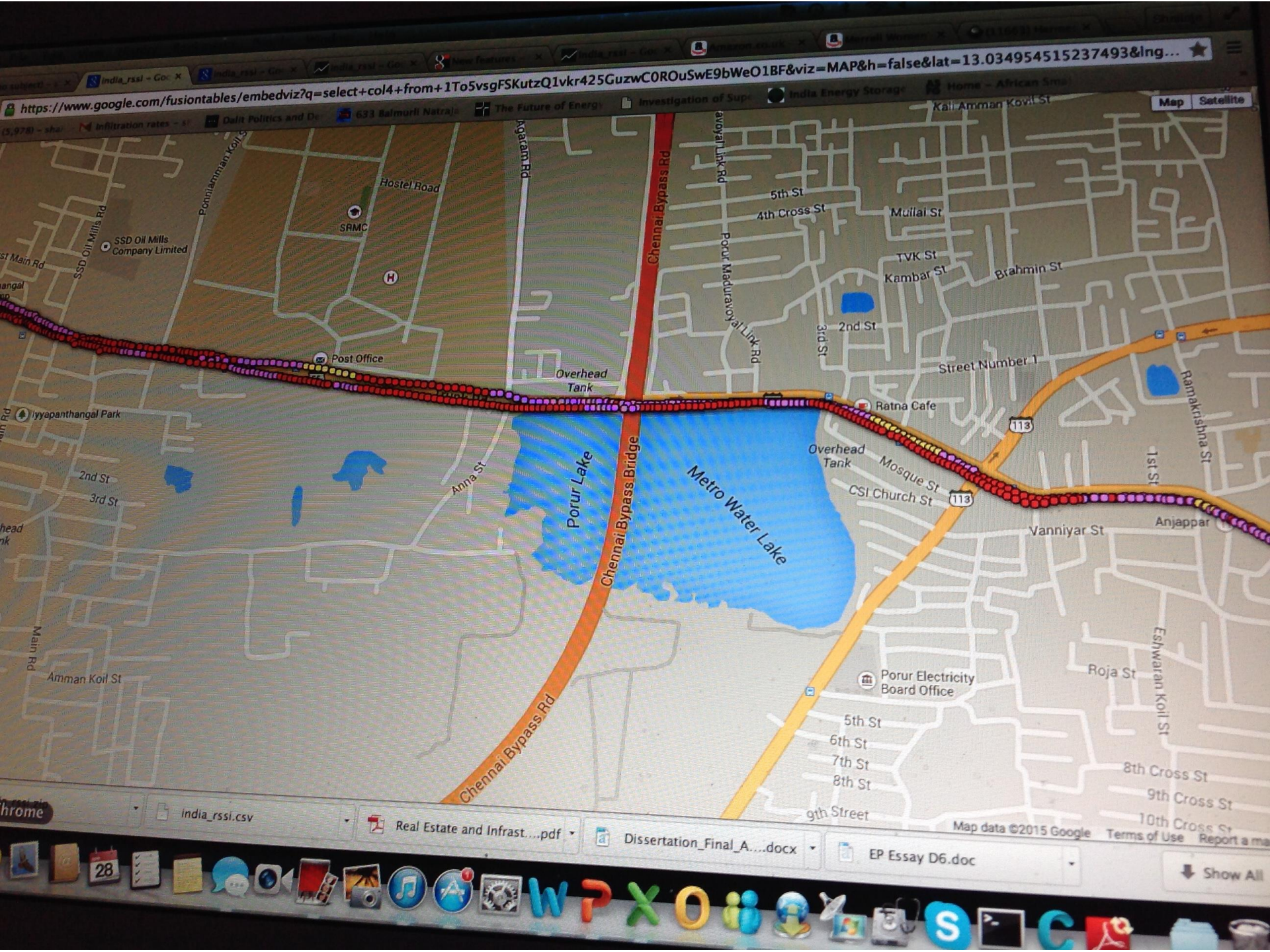
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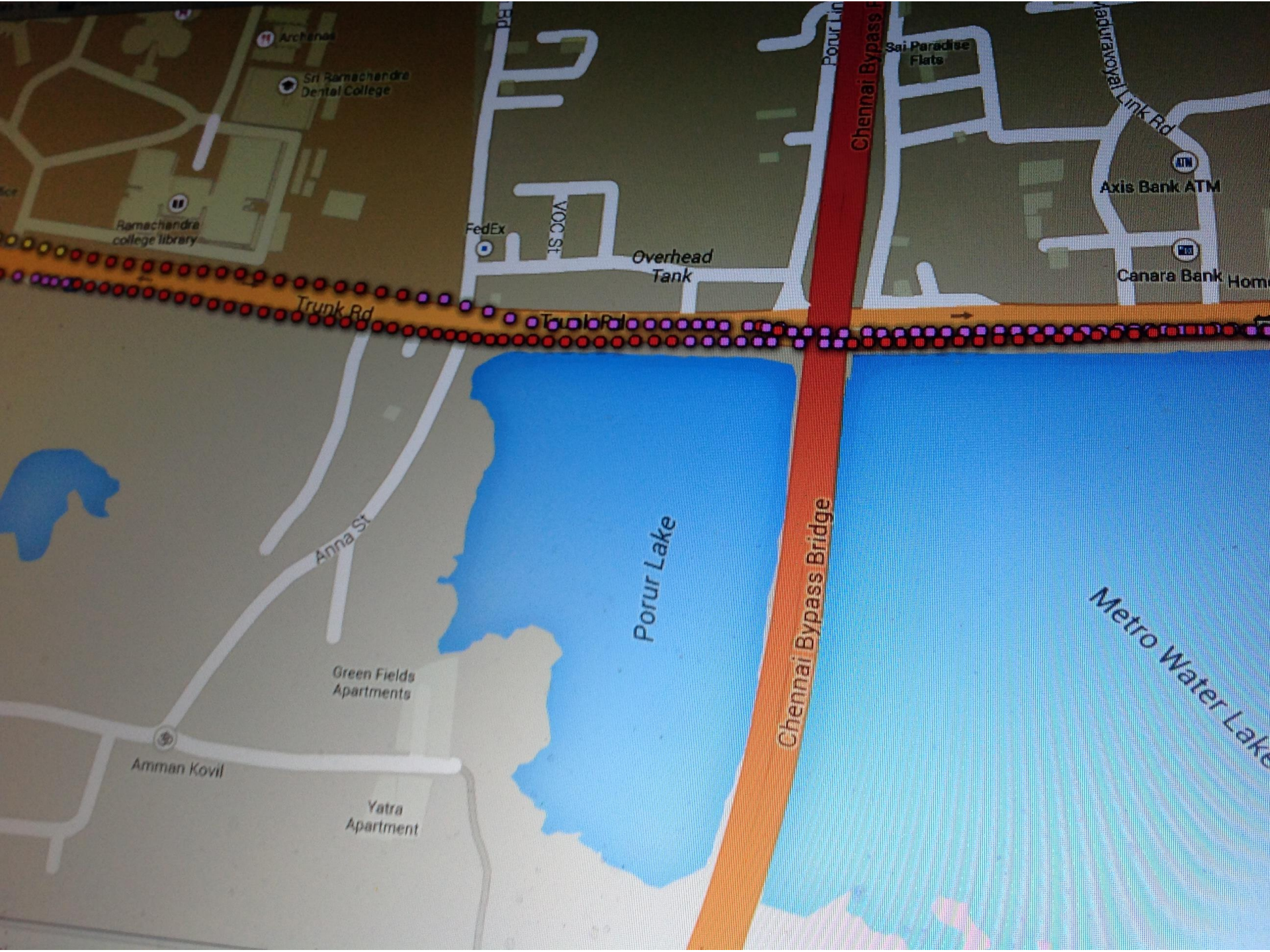
Sri Ramachandra
Dental College

Ramachandra
college library

FedEx

VOC St

Overhead
Tank

Trunk Rd

Trunk Rd

Anna St

Porur Lake

Green Fields
Apartments

Amman Kovil

Yatra
Apartment

Chennai Bypass Bridge

Porur Link Rd

Chennai Bypass

Sai Paradise
Flats

Maduravoyal Link Rd

Axis Bank ATM

Canara Bank Hom

Metro Water Lake

Archanes

Sri Ramachandra
Dental College

Ramachandre
college library

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Canara Bank Hom

Anna St

Porur Lake

Chennai Bypass Bridge

Metro Water Lake

Green Fields
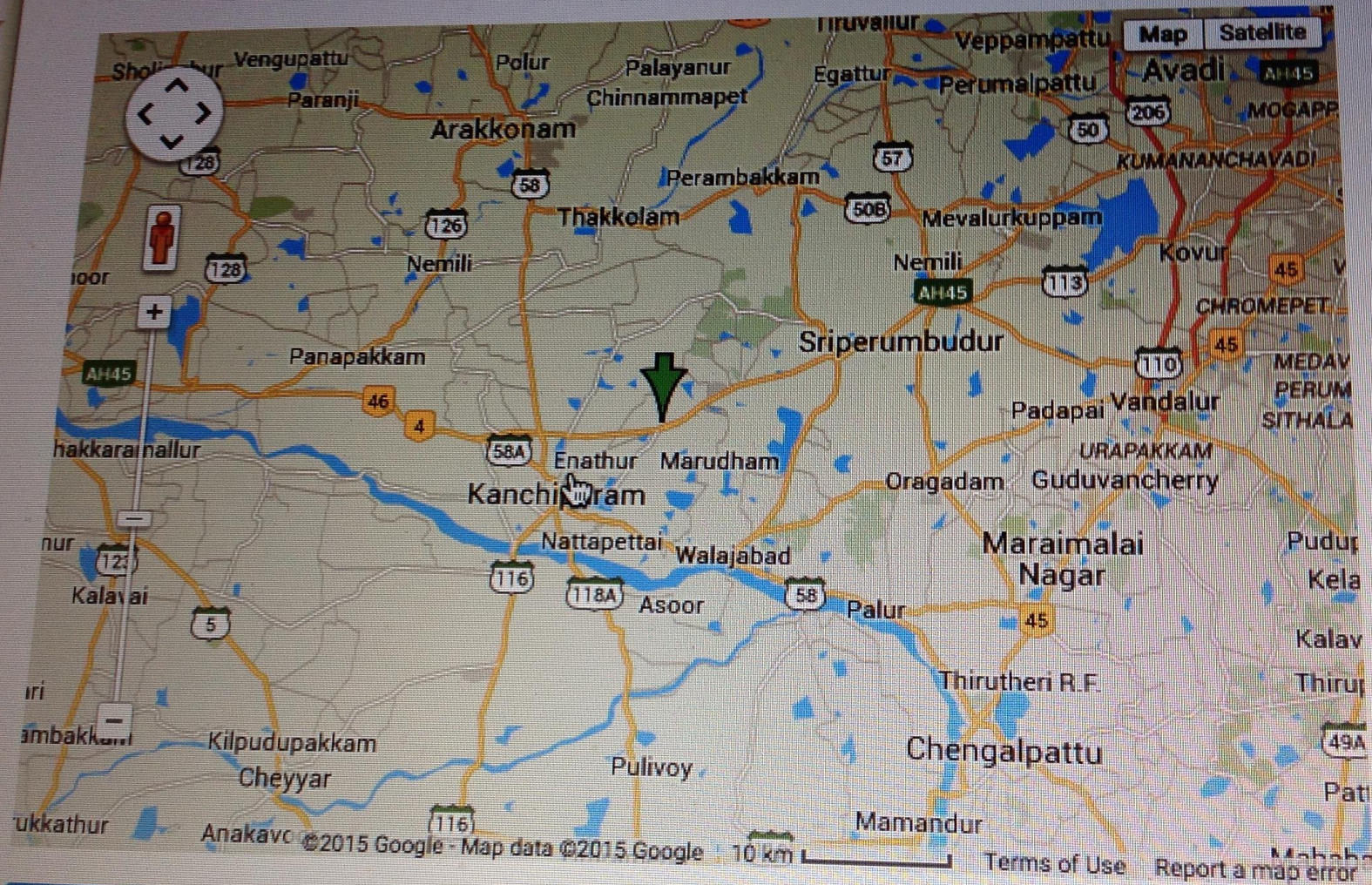Apartments

Amman Kovil

Yatra
Apartment

rssi:-81

asu: 16

operator: Aircel Chennai

cell info: GSM CID2663LAC401MCC404MNC41

lon: 80.2365666666667

lat: 13.0075883333333

accuracy: 7
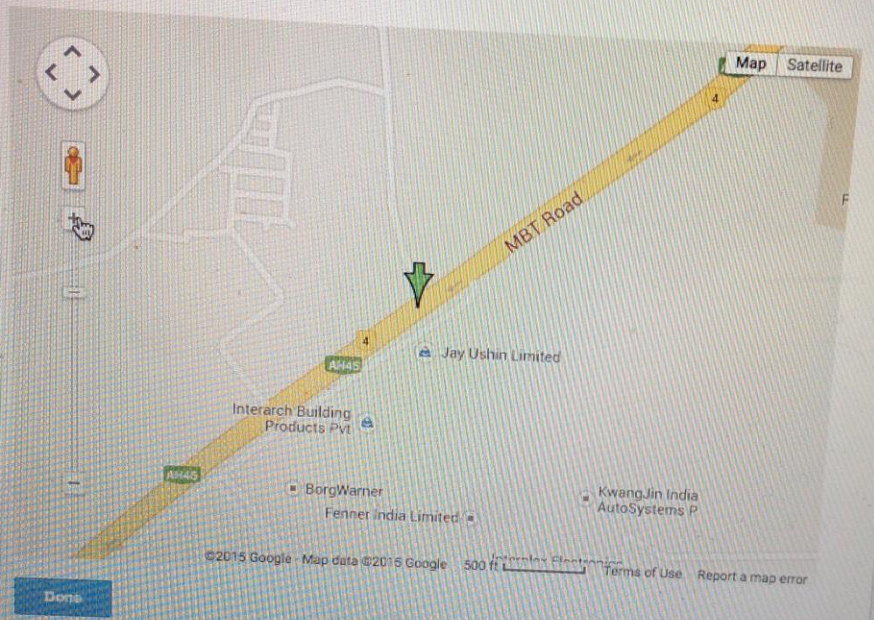timestamp: 2015-03-01 10:21:10.609+01

rssi: -81

asu: 16

operator: Aircel Chennai

cell info: GSM CID2663LAC401MCC404MNC41

lon: 80.2366883333333

lat: 13.00758

accuracy: 7

timestamp: 2015-03-01 10:21:11.601+01

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Location preview   ×

Map   Satellite

MBT Road

4

AH45

Jay Ushin Limited

Interarch Building
Products Pvt

AH45

BorgWarner   KwangJin India
                                    AutoSystems P
Fenner India Limited

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MacBook Air

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Location preview

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Map | Satellite

AH45

4

MBT Road

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RASTAY

Chat, discuss and suggest.

Networking

Share aspirations and experiences

Projects

Career

Higher studies

Training

Access to reliable information

RASTAY application
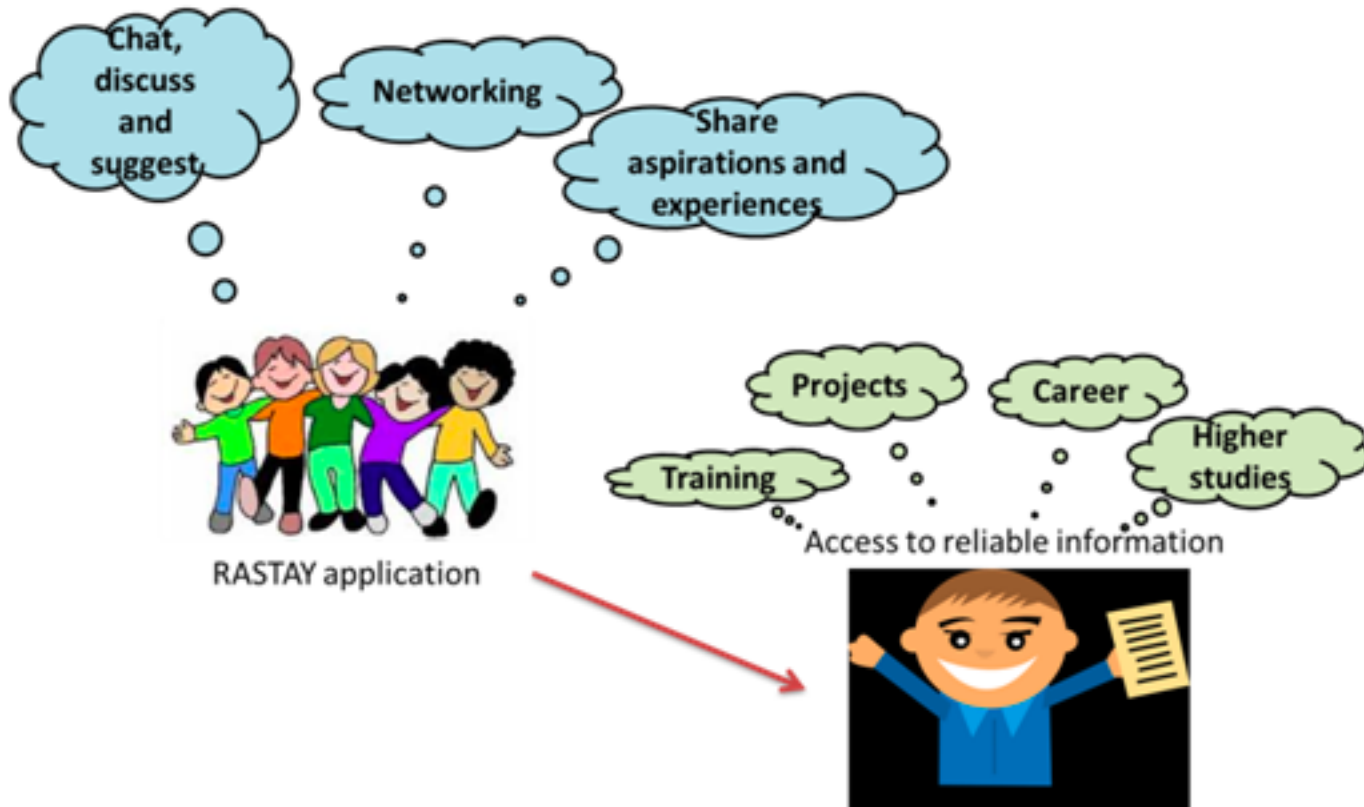
Users	No. of registered users since 15 October 2014	No. of active students	Android app users	Web interface users	Data snooping
Total no. of users	24	15-16	6	18	0
IITM colleagues as mentors	9	9	3	6	2
RETC students as mentors	5	3	2	5	0
Students from rural areas	8	3-4	1	7	0

Pilot Study of ICT knowledge and use among youth (18-25 years)

- 100 respondents
- 3 districts
- Survey administered by IIT research staff, with NGO gatekeepers
- Sampling criteria
  - Moderate connectivity (less than 5 km from town)
  - Poor connectivity (more than 15 km from town)

Results of survey, February 2015

- Just over 50 percent have Android phones
- 98 percent have know that model name
- Vodafone, Airtel and Aircel are the major providers
- Just over 75 percent have been using a mobile phone for over 4 years
- 68 percent use their mobile phones to access the internet, 55 percent use the internet everyday
- 91 percent prefer English to Tamil for browsing
- 22 percent use Flipkart and Snapdeal for purchases
- 70 percent using Facebook, and 47 percent using WhatsApp