



North western Rural Development project



IRAP Component Planning for Sustainable Access

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Keo Sun Sophany

NRDP IRAP Specialist

Structure of Presentation

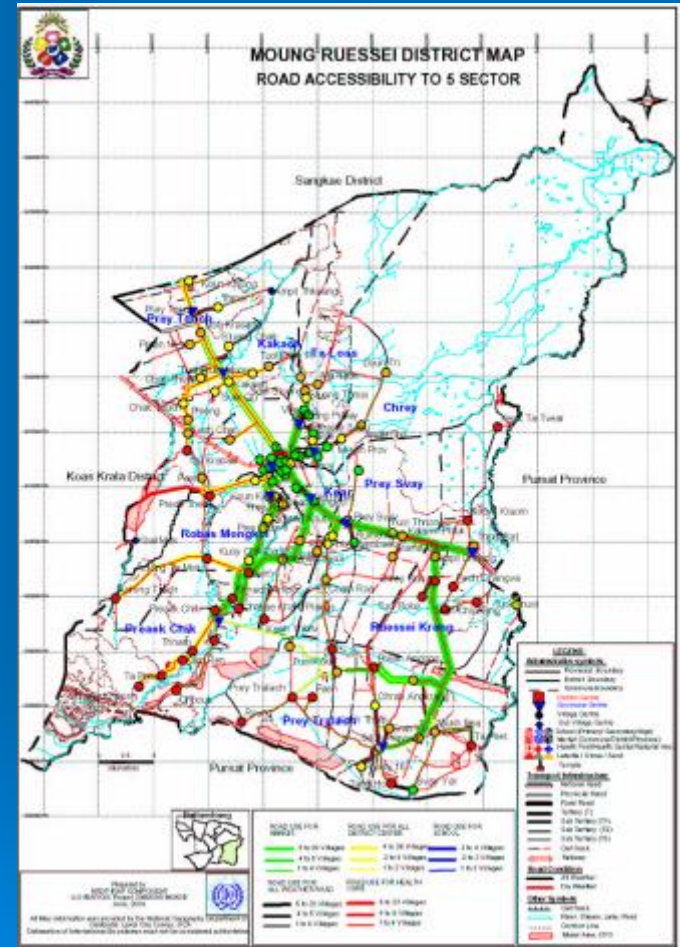
Integrated Rural Accessibility Planning (IRAP)

- Concept
- Planning Process
- Planning Output



IRAP

- Planning tool
 - Area Planning (district)
- Accessibility
 - Basic needs and services
- Building capacity
 - Training course
 - On the job



Rationale of using IRAP

Lack of Accessibility – One of the fundamental constraints to development



Improving Access- a major tool in
Poverty reduction

Improvement Accessibility

Improving Transport
Infrastructure

→ Mobility

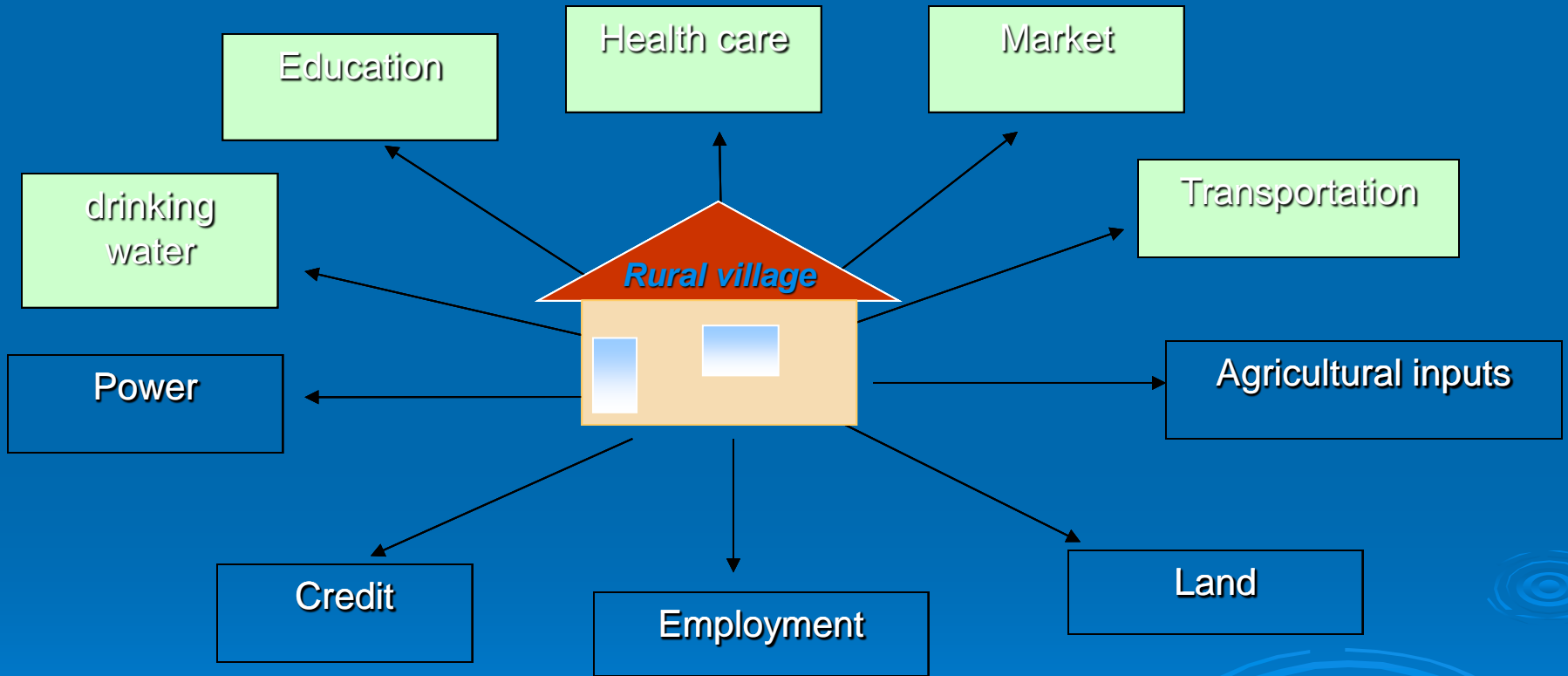


Improving distribution of
services

→ Lack or distant

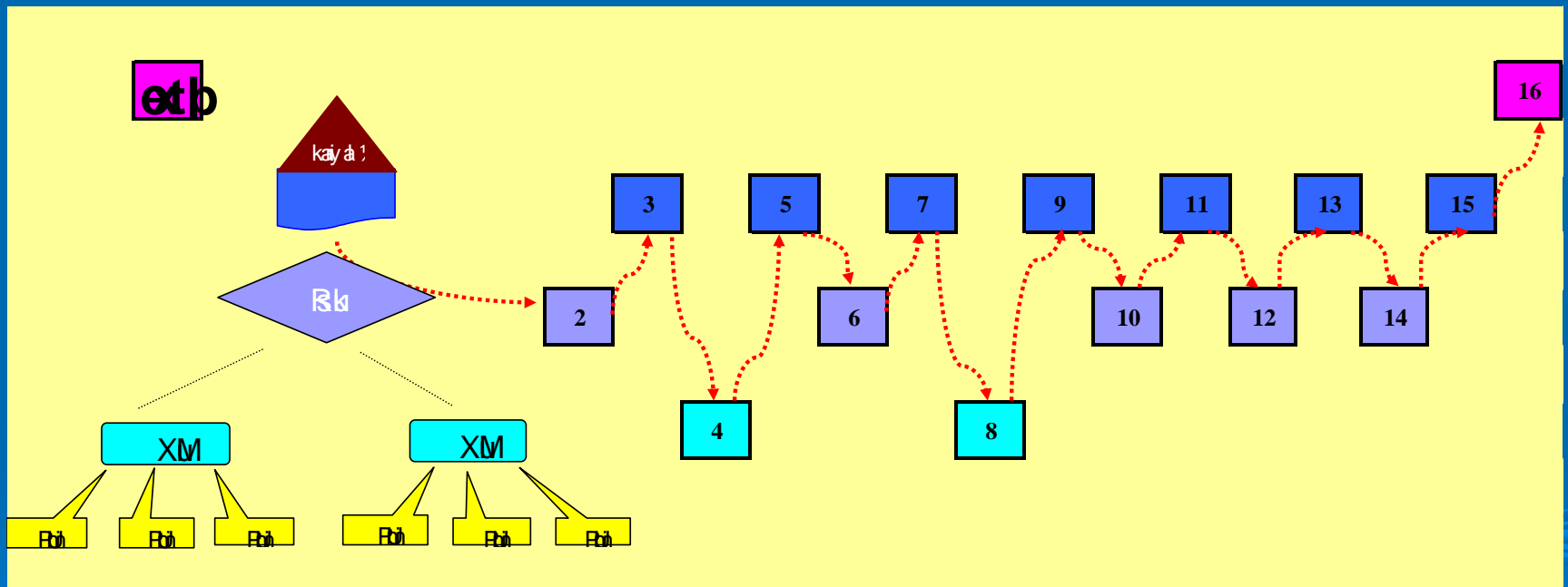


Accessibility



IRAP process

Series of workshops



Multi sector Planning

Locating and distribution of public services

- Drinking water
- School
- Health care
- Market
- Road

Maintenance

Upgrading

Rehabilitation



Participatory

- workshop
 - Commune, district, province
- Participant
 - Institution, authority, NGO/IOs
 - Who involves in development
- Discussion, comments, decision



IRAP Data

- ❑ Secondary and Primary
- ❑ Commune workshop
- ❑ Public Asset
 - Quantity, Quality and condition
 - Road network Health care facility
 - School Market
 - Wells
 - Local resources, cultural heritage, protected area

Data

- Accessibility to infrastructure and services
 - Travel time and cost
 - Frequency
- Perception
 - Main problem and Priority
 - Sector comparison
- Route use



Field verification

- ❑ Road alignment
- ❑ Location
 - Administrative
 - Local resource
 - Public infrastructure
- ❑ Tool
 - GPS
 - Point (coordinate)

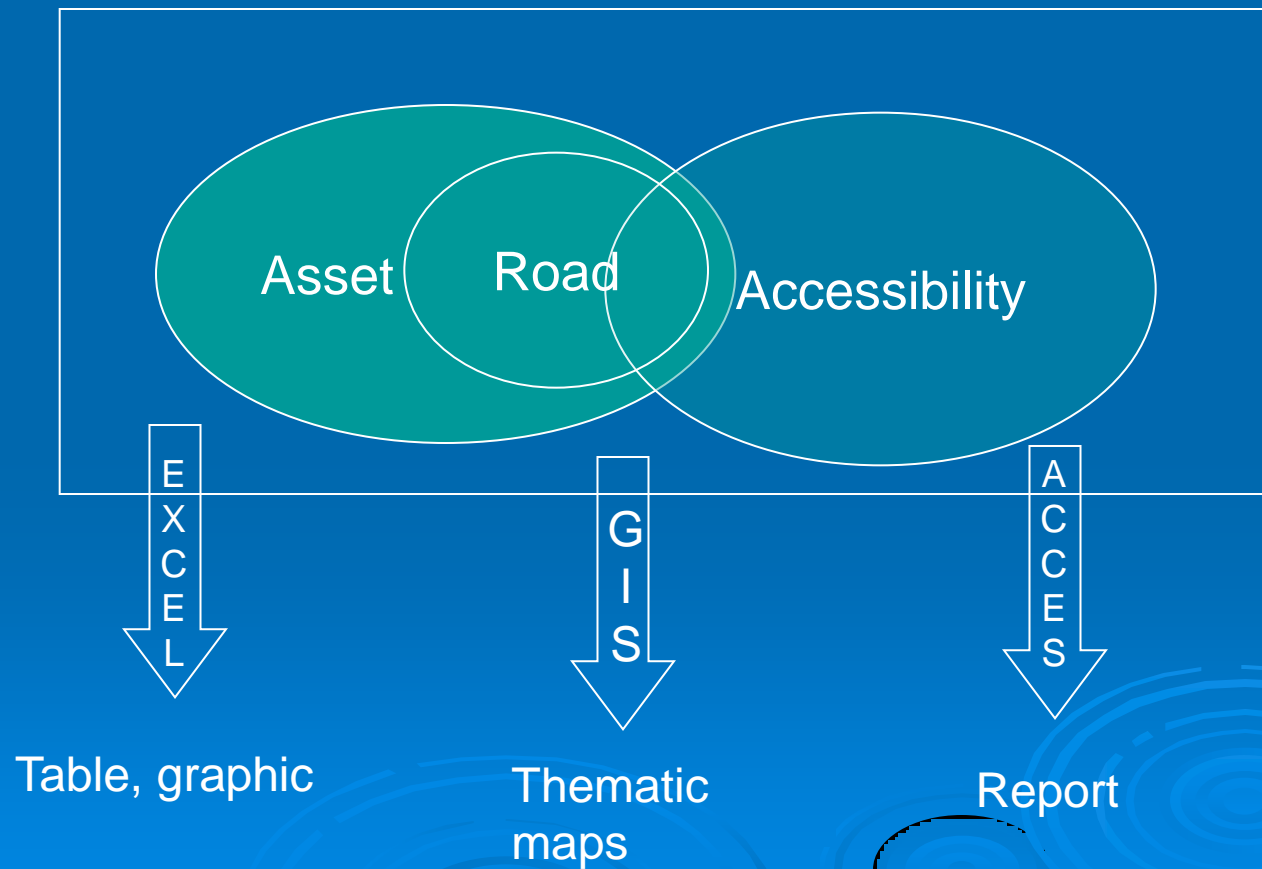


Data Management

- ❑ Data entry
- ❑ Data analysis
 - Village accessibility situation
- ❑ Database development and maintenance
 - Organising, relating data
 - Provincial, regional, national
 - Maintenance, updating

Data Analysis

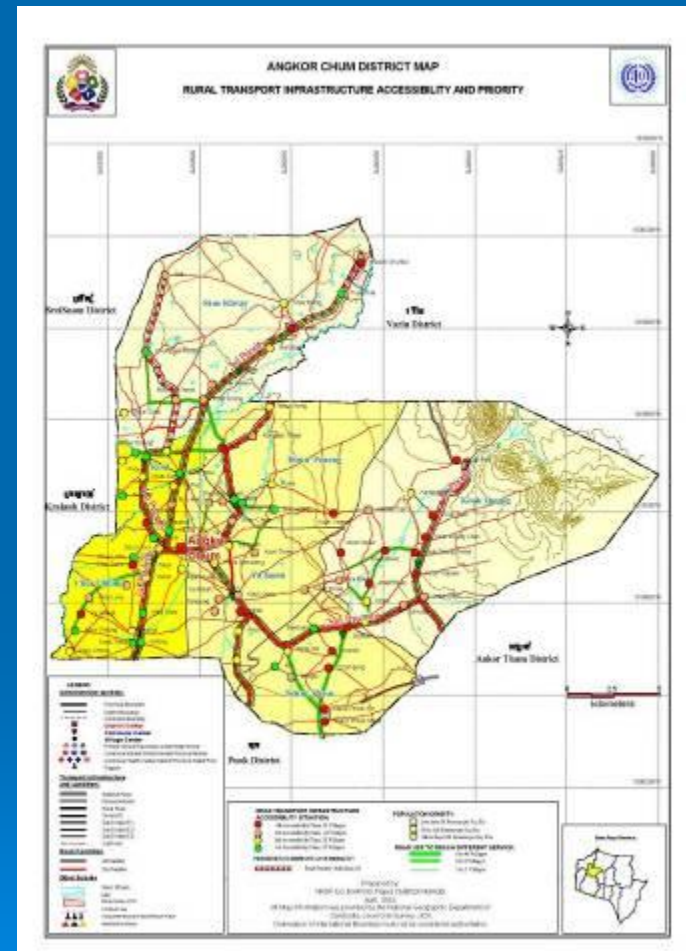
IRAP Database



Analysis

- Accessibility situation
 - Sector Indicator
 - Accessibility classification
 - Poorest
 - Poor
 - Average
 - Above average

Village, area to improve access



Sector and Investment Planning

- Prioritisation
 - Calculation and perception
 - Accessibility classification
 - Perception
 - Actual situation
- Investment identification and prioritisation
 - Criteria

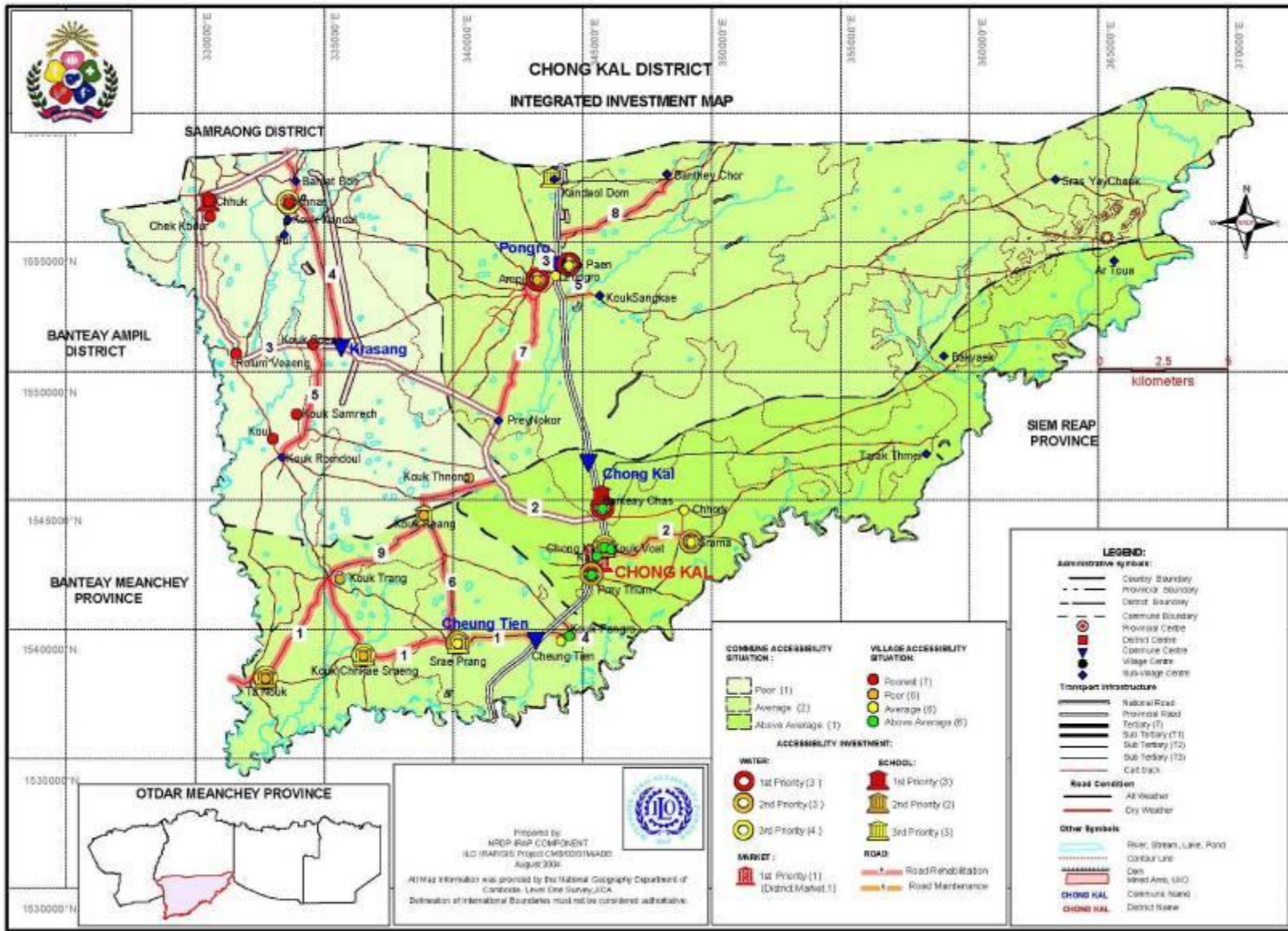


Integrated Investment Planning

- Group discussion
 - Road priority
 - Maintenance and Rehabilitation
 - Importance of the road
 - Beneficiary (number of villages, people)
 - Local resource
 - Mine threat



CHONG KAL DISTRICT INTEGRATED INVESTMENT MAP



2.5
kilometers

LEGEND:

Administrative symbols:

- Country Boundary
- Province Boundary
- District Boundary
- Commune Boundary
- Province Centre
- District Centre
- Commune Centre
- Village Centre
- Sub-village Centre

Transport Infrastructure

- National Road
- Provincial Road
- Tertiary (T)
- Sub-Tertiary (T2)
- Sub-Tertiary (T3)
- Cart track

Road Condition

- All Weather
- Dry Weather

Other Symbols

- River, Stream, Lake, Pond
- Contour Line
- Canal
- Invest Area, UIC
- Commune Name
- District Name

COMMUNE ACCESSIBILITY SITUATION:

- Poor (1)
- Average (2)
- Above Average (3)

VILLAGE ACCESSIBILITY SITUATION:

- Poor (1)
- Poor (6)
- Average (6)
- Above Average (6)

ACCESSIBILITY INVESTMENT:

WATER:

- 1st Priority (3)
- 2nd Priority (3)
- 3rd Priority (4)

SCHOOL:

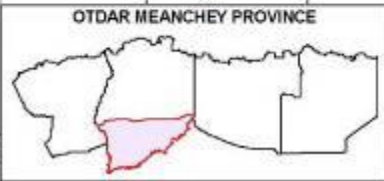
- 1st Priority (3)
- 2nd Priority (2)
- 3rd Priority (3)

MARKET:

- 1st Priority (1) (District Market 1)

ROAD:

- Road Rehabilitation
- Road Maintenance




 Prepared by
 MRP-IRP COMPONENT
 ILO (RANGIS Project CMB020/MA02)
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 All Map Information was provided by the National Geography Department of
 Cambodia, Levin One Survey, JICA.
 Delimitation of International Boundaries must not be considered authoritative.



**NRDP Project - IRAP/GIS Project
Priority Road Pre-feasibility Form**

Location:

Data Sheet: Road Name: Date of Survey:

Province: Length: Km

District: Start Location: End Location:

Commune(s): Identifier: Identifier:

Road Characteristics:

Road Category: Tertiary Sub-Tertiary 1 Sub-Tertiary 2 Sub-Tertiary 3

Existing Surface type: Condition:

Alignment: Average carriage width: m
Road Embankment: Km
Track: Km

All Year Road accessibility: Km
Only dry Season accessibility: Km
Not accessible: Km

Maintainable: Km
Non Maintainable: Km

Structures: Culverts:
Bridges:

Maintenance History

Routine: Never: In progress: Stopped: When: Institution:

Periodic: Most Recent: Length: Km Institution:

Rehabilitation: Most Recent: Length: Km Institution:

Socio-Economic Information: (Catchments area 2 either side)

Accessibility: Number of primary schools: Tourist Sites: Yes No

Number of Villages: Number of Secondary Schools: Protected Area: Yes No

Population Served / Km: Number of Health Centres: Mine Contamination: Yes No

Number of Markets:

Technical Feasibility

Construction Material availability: Laterite: Stone: Sand:

Local resources: Workers per Km:

Hydrological: Flood risk: High Low

Possible Surface Option: Laterite: Bitumen Surface Treatment: Stone packing:

Recommended Technology Choice: LBAT: Mix LBAT/MB: MB:

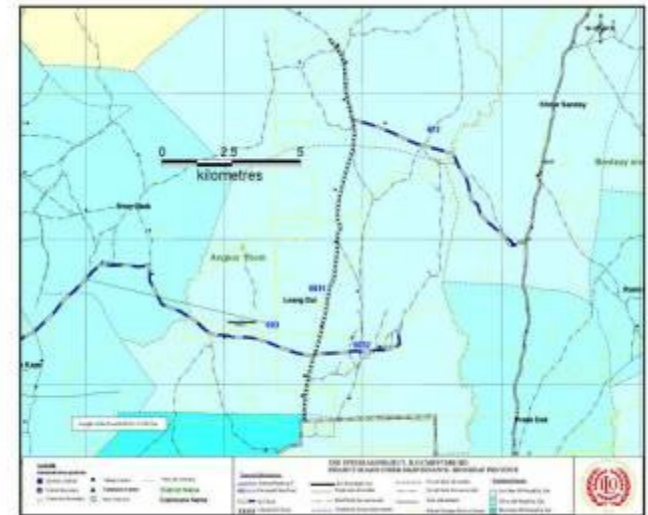
Estimated Construction Cost: Total: Per Kilometre:

Economic Feasibility

Cost Effectiveness Ratio

Financial: Economic: Social:

Pre-feasibility study



1st, 2nd and 3rd priority

AAP recommendations

- Technology choice (labour)
 - Labour based (LBAT)
 - Machine based ⇒ 60% of all roads use LBAT
 - Mixed
- Surface option (Local resource)
 - Laterite
 - Bituminous ⇒ Reduced maintenance cost
 - Stone packing
 - Bamboo reinforced concrete
- Cost effectiveness analysis ⇒ Financial feasibility

Action Plan Approval

- Provincial workshop
 - District plan approval
 - Integration into provincial planning



Provincial Planning Process

IRAP is a planning tool complementing the existing planning

PRDC integrates IRAP and Local Planning Process into province plan



Planning Output

- Capacity Building
 - Counterpart staff
 - Planning in Accessibility
- Document produced
 - Road inventory
 - District Accessibility profile
 - Data book
- Map
- Accessibility Action Plan
 - Integration road investment priority and other investments

Output

- ❑ Action Plan
- ❑ Leading
 - Investment
 - Non target district
- ❑ Implementation
 - NRDP project
 - Target district
- ❑ Base for assessment
 - Accessibility
 - Review

All Year round Access

