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# SOCIO-ECONOMY SURVEY METHOD FOR REDD+ PROJECT: FOREST DEPENDENT COMMUNITY

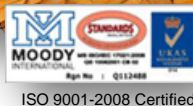
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FRIM-FFPRI Training Workshop on REDD+  
Research Project in Peninsular Malaysia

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# Aim

Conducting socio-economic studies among households in communities and villages

## Techniques involved

- Rapid rural appraisal  
(Group discussion, community meetings, key informant interviews, stories & taking-note)
  - Preliminary stage of the study, provide basic information, & ethno-histories of the study site for baseline in questionnaire design
- Survey research
  - Collect quantitative & qualitative data, through structured interviews with the head of the household, using both closed & open questions
  - Gather specific information, relevant to the survey objective
- Field research
  - Qualitative data
  - Better understanding on the socio-economic conditions & activities of villagers
  - The data gathered are used to cross-check information collected from the survey



# Steps in developing & implementing the socio-economics survey

## Step 1: Designing the survey

- includes survey design; sampling techniques & sample size; data requirement (types of data and data collection); target sample; and questionnaire design

- **Determine the objective & purpose of the survey**  
(provide the framework for the content & scope of the survey work. It is used to help identify which kinds of stakeholders & communities are to be surveyed)
- **Data requirement**
  - primary data  
(rapid rural appraisal, individual & group discussion & household survey)
  - Secondary data  
(comprises information gathered from published media such as books, articles, journals & reports)
- **Determine the sample size**
  - ensure the data accuracy and precision  
(the sample size needs to be sufficient to ensure that the survey results will be statistically relevant)
- **Sampling technique**
  - Random sampling - ensure that the sample is representative of the study area  
(approaches to determining a random sample, e.g. simple random sample, systematic, stratified and clusters)
- **Questionnaire design**
  - questions can be structured & asked as open, closed or partially open questions. The type of question used will depend on the information that is being gathered



## Step 2: Planning and training the team

- Well-trained & experienced team is essential for the success of any socio-economic survey
- Relevant technical knowledge in socio-economics, forestry and natural resources – great asset
- All members of the team should be trained in all types of survey (household, focus groups, and key informant interviews)
- Should understand of the aims of the work & the meaning of every question to be asked
- Conduct workshop & practical field-based training - provide the best understanding of survey methods and procedures (enhance the communication skills and ability of enumerators to interview during data collection or survey)



# Step 3 – Implementation

## Conducted:

- **Rapid Rural Appraisal includes**

- Community meetings

- ✓ valuable way for the survey team to meet with the villagers, explain the survey work – its aims and approach – and ensure that all members of the community understand the expected outcomes of the survey work
- ✓ A decision to conduct a community meeting should be made only after meeting the community or village head

- Key informant interviews

- ✓ key informants - individuals who are deemed to have knowledge of particular issues. provide the interview team with detailed information & importantly, interpretation of key issues that other members of the community may not be able to provide
- ✓ potential key informants should be selected, in consultation with the village head, traditional local leader, for an in-depth interview with the survey team

- Group discussions

- ✓ discussions with small groups consisting of a few individuals
- ✓ obtain comments or reactions of the respondents

- **Household survey**

- A face-to-face interview survey, where interviewer asks the questionnaire orally & record the respondents' answers
- Interviewer was guided by structured questionnaire

## Field research





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# HIGHLIGHTS

## Socio-economic survey (land development scheme in P. Malaysia)

2012



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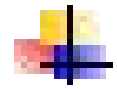
# New land development, P. Malaysia

- ✚ Federal Land Development Authority (FELDA)
  - Opened > 600,000 ha (1970-1990)
- ✚ State agencies – Regional Development Authorities (RDAs)
  - Pahang Tenggara Development Authority (DARA), South Kelantan Development Authority (KESEDAR), Terengganu Tengah Development Authority (KETENGAH), Johor Tenggara Development Authority (KEJORA), Jengka Regional Development Authority (JENGKA)
- ✚ Federal Land Consolidation and Rehabilitation Authority (FELCRA)
- ✚ Rubber Industry Smallholders Development Authority (RISDA)



# Main Goals

## (New land development, P. Malaysia)



- Poverty eradication and the restructuring of society
  - Focuses - opening up of new land schemes & modernisation of agriculture



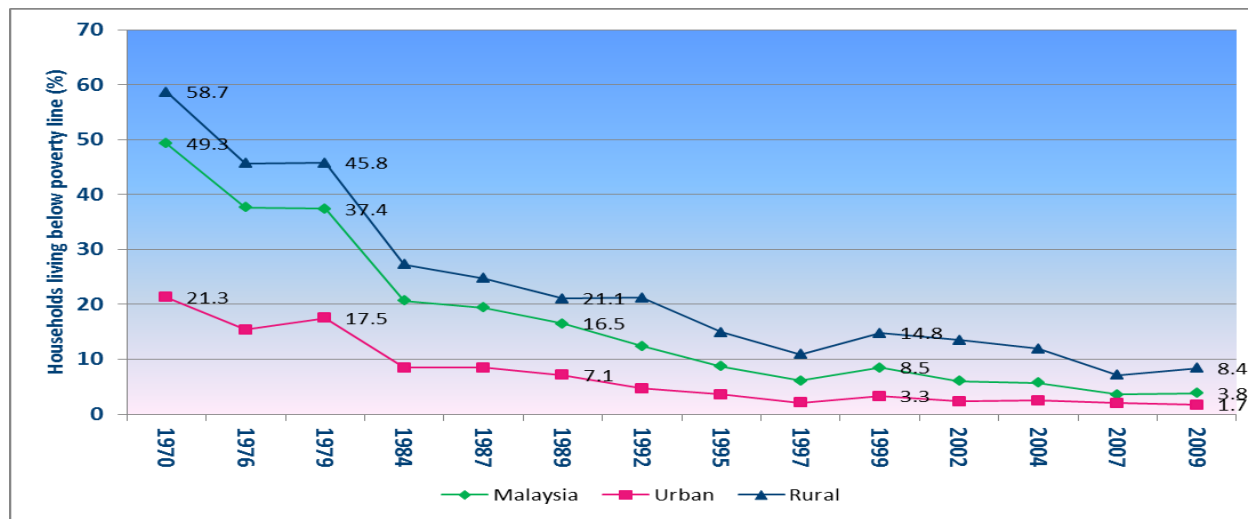
# Issue;



Whether introduction of these programmes helps to **improve income and alleviate rural poverty**

# Incidence of poverty, Malaysia

- ✚ Malaysia - incidence of poverty has reduced from 49% (1970) to 3.8% (2009), a reduction of 46% in 39 years
  - Rural areas declined from 59% to 8%
  - Urban areas from 21% to 2%



Source: Economic Planning Unit (EPU), Malaysia

- The significant reduction in poverty is a result of concerted government's efforts in implementing national development programmes to eradicate poverty
- Began - implementation of the New Economic Policy (1970-1990), continue after the NEP period via National Development Policy (1990-2000) and National Vision Policy (1991-2020)

# Case study (Socio-economic study)

## ✚ Main objective:

Examining the importance of agriculture activities within land development scheme area to local household economy, especially in terms of income generation & eradicating poverty

## ✚ Methodology

Technique of data collection (2 main techniques)

- **rapid rural appraisal**; group discussion, ethno-histories, stories and taking-note
- **survey research**; a face-to-face interview survey (whereby the interviewers ask the questionnaire orally and record the respondents' answers)



# Studied villages



- Survey - successfully conducted in 6 villages
- 8 enumerators involved
- Conducted in the months of September & December 2012

## Villages surveyed

<i>Villages</i>	<i>Estimated households</i>	<i>Sampled households</i>	<i>% of household</i>
FELDA Bukit Goh, Pahang	671	213	32
RKT Lebir (KESEDAR), Kelantan	186	100	54
Kubang Pasu (RISDA), Kedah	400	86	22
FELDA Trolak Utara, Perak	475	148	31
Kg. Melayu 4, Paloh (FELCRA), Johor	45	37	82
Kg. Sg. Ara, K. Tinggi (FELCRA), Johor	277	113	41
<b>Total</b>	<b>2,054</b>	<b>697</b>	<b>34</b>

# Results

## (level of average monthly household income)

- In 2012, the average monthly household income of six villages studied was **RM3,188**
- Lowest in RKT Lebir (KESEDAR) (RM1,736 a month)
- Highest in FELDA Bukit Goh (RM4,014 a month)
- The income level is higher than that of the average household for Rural Malaysia (RM2,545)

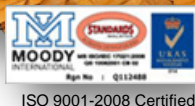
<i>Villages</i>	<i>Average monthly household income (RM)</i>
FELDA Bukit Goh	4,014
RKT Lebir (KESEDAR)	1,736
Kubang Pasu (RISDA)	3,942
FELDA Trolak Utara	3,182
Kg. Melayu 4, Paloh (FELCRA)	2,376
Kg. Sg. Ara, K. Tinggi (FELCRA)	2,619
<b>Six villages</b>	<b>3,188</b>
Rural Malaysia (2009)	2,545

*Source: Six villages – field data.*

*Tenth Malaysia Plan (Government of Malaysia 2010)*



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# Sources of average monthly household income

	Bukit Goh	%	RKT Lebir	%	Kbg. Pasu	%	Trolak Utara	%	Kg. Melayu 4	%	Kg. Sg. Ara	%	6 Villages (RM)	%
<b>A. Cash Income</b>														
<b>I. Employee</b>														
Oil palm mill worker	9.39	0	0	0	0	0	54.73	2	81.08	3	6.19	0	19.8	1
Rubber mill worker	0	0	0	0	5.81	0	0	0	0	0	26.55	1	5.02	0
Other mill worker	25.35	1	0	0	8.37	0	25	1	78.38	3	38.94	1	24.56	1
Salary (Government)	328.64	8	40	2	545.4	14	163.51	5	188.38	8	301.77	12	267.1	8
Salary (Private sector)	852.11	21	40	2	832.6	21	221.62	7	297.3	13	398.67	15	496.34	16
Contract worker	44.6	1	5	0	44.19	1	33.11	1	107.03	5	95.13	4	47.93	2
Nursery worker	0	0	0	0	0	0	0	0	40.54	2	2.21	0	2.51	0
Others	130.05	3	50	3	41.86	1	23.65	1	44.32	2	196.62	8	91.33	3
<b>II. Sales/Self-employed</b>														
Sales of oil palm	1796.46	45	0	0	0	0	1955.7	61	324.32	14	8.85	0	982.91	31
Sales of rubber	0	0	1283.9	74	1905	48	0	0	0	0	35.4	1	424.95	13
Dividend (land scheme authority)	0	0	0	0	0	0	0	0	706.54	30	844.78	32	174.46	5
Homestay operators	0	0	0	0	0	0	0	0	0	0	15.04	1	2.44	0
Retail store/restaurant operators	74.65	2	60	3	0	0	43.92	1	27.03	1	114.6	4	60.76	2
Petty trade	248.83	6	38.5	2	6.98	0	194.59	6	0	0	217.7	8	159.04	5
Sales of livestock	25.02	1	11.5	1	0	0	11.49	0	0	0	0	0	11.74	0
Others	166.67	4	19.5	1	172.1	4	44.39	1	271.35	11	84.07	3	112.42	4
<b>III. Agriculture products</b>														
Vegetable farming	0	0	10	1	0	0	0	0	0	0	0	0	1.43	0
Orchard farming	0	0	2.5	0	0	0	0	0	0	0	0	0	0.36	0
Others	4.69	0	0	0	0	0	0	0	0	0	0	0	1.43	0
<b>iv. Remittance</b>														
	54.23	1	64	4	208.7	5	155.07	5	43.24	2	32.3	1	91.97	3
<b>v. Others (bonus, rental, benefits/interest)</b>														
	12.06	0	0	0	0	0	34.46	1	13.51	1	8.85	0	13.15	0
<b>Sub-total</b>	<b>3773</b>	<b>94</b>	<b>1625</b>	<b>94</b>	<b>3771</b>	<b>96</b>	<b>2961</b>	<b>93</b>	<b>2223</b>	<b>94</b>	<b>2428</b>	<b>93</b>	<b>2992</b>	<b>94</b>
<b>B. In-kind Income</b>														
Fish consumed	0.09	0	2.06	0	0	0	0	0	1.35	0	0	0	0.4	0
Poultry and vegetable	10.26	0	3.48	0	0	0	1.69	0	0.81	0	2.74	0	4.48	0
Imputed rent	230.52	6	94.7	5	171.6	4	217.03	7	150	6	188.72	7	189.85	6
Natural water consumed	0	0	10.5	1	0	0	1.93	0	0.54	0	0	0	1.94	0
Others	0	0	0.1	0	0	0	0	0	0	0	0	0	0.01	0
<b>Sub-total</b>	<b>241</b>	<b>6</b>	<b>111</b>	<b>6</b>	<b>172</b>	<b>4</b>	<b>221</b>	<b>7</b>	<b>153</b>	<b>6</b>	<b>191</b>	<b>7</b>	<b>197</b>	<b>6</b>
<b>TOTAL</b>	<b>4014</b>	<b>100</b>	<b>1736</b>	<b>100</b>	<b>3942</b>	<b>100</b>	<b>3182</b>	<b>100</b>	<b>2376</b>	<b>100</b>	<b>2619</b>	<b>100</b>	<b>3188</b>	<b>100</b>

Source: Field data.

In total, highest percentage (cash income) - Agriculture activities within the land scheme area (oil palm & rubber), 49%

FELDA Bkt. Goh, sale of oil palm - 45%  
RKT Lebir, rubber tapper - 74%

RISDA Kbg. Pasu, rubber tapper - 48%

FELDA trolak, sale of oil palm - 61%

FELCRA Kg. Melayu 4, sale of oil palm & dividend - 44%

FELCRA Sg. Ara, , sale of oil palm, rubber & dividend - 33%

Non-cash income - use of residence/ dwelling from home (6%)

Cash income - 94%

Income in kind - 6%



# Average monthly household income within land development scheme (RM)

- ✚ Income generated within land scheme area is generally high compared to those outside it
- ✚ On average - RM2,260 (71%), generated from the Land scheme area
- ✚ Lowest (RM1,587) - RKT Lebir (KESEDAR)
- ✚ Highest (RM2,709) - FELDA Bukit Goh

Village	Within Land Scheme area	Outside Land Scheme area	Total
FELDA Bukit Goh	2,709 (67)	1,305 (33)	4,014 (100)
RKT Lebir (KESEDAR)	1,587 (91)	149 (9)	1,736 (100)
Kubang Pasu (RISDA)	2,303 (58)	1,639 (42)	3,942 (100)
FELDA Trolak Utara	2,584 (81)	598 (19)	3,182 (100)
Kg. Melayu 4, Paloh (FELCRA)	1,661 (70)	715 (30)	2,376 (100)
Kg. Sg. Ara, K. Tinggi (FELCRA)	1,752 (67)	867 (33)	2,619 (100)
All 6 villages	2,260 (71)	928 (29)	3,188 (100)

*figures in parentheses are percentages of average monthly household income*

# Poverty eradication

- ✚ The extent of poverty among these local villagers could be indicated from the incidence of poverty among the households in the six villages
- ✚ Poverty - "is measured on the basis of a minimum expenditure level or the poverty line income (PLI) to separate the poor from non-poor"
- ✚ In 2009, the per capita PLI was RM197
- ✚ Taking into consideration the rise in the consumers' price index of about 3.5% between 2009 and 2012, the per capita PLI was calculated to be RM204 in 2012 and this used to measure the incidence of poverty among the six villages studied





# Incidence of poverty

- 6 villages averaged 4% in 2012 (ranging from 0.7% in FELDA Trolak Utara to 14% in RKT Lebir)
- Poverty among villages in Land schemes area except in RKT Lebir (KESEDAR) was relatively lower compared to 8.4% among all Rural Malaysian households in 2009

Villages	Total households	No. of poor households	Incidence of poverty (%)
FELDA Bukit Goh	213	6	2.8
RKT Lebir (KESEDAR)	100	14	14
Kubang Pasu (RISDA)	86	1	1.2
FELDA Trolak Utara	148	1	0.7
Kg. Melayu 4, Paloh (FELCRA)	37	3	8.1
Kg. Sg. Ara, K. Tinggi (FELCRA)	113	3	2.7
All six villages	697	28	4
Rural Malaysia, 2009 ('000)	2211	186	8.4

Source: Six villages – field data.  
Malaysia – Government of Malaysia (2010)



# Conclusion

Income received from oil palm and rubber activities under rural land development scheme is important in eradicating poverty among local households





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# HIGHLIGHTS

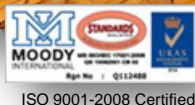
## Socio-economic survey

(Extent of forest dependent by local community in P. Malaysia:  
A case study of protected area)

2014



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# PA Coverage in P. Malaysia (terrestrial)

STATE	Size of State (ha)	Size o Protected Area (ha)	%
JOHOR	1,898,688	235,490	12.4
KEDAH	942,500	2	0.0
KELANTAN	1,510,462	127,947	8.5
MELAKA	165,200	107	0.1
NEGERI SEMBILAN	665,709	55,343	8.3
PAHANG	3,596,500	821,463	22.8
PERAK	2,100,500	278,412	13.3
PERLIS	79,500	4,380	5.5
PENANG	103,104	1,414	1.4
SELANGOR	793,020	106,734	13.5
TERENGGANU	1,295,514	139,822	10.8
FEDERAL TERRITORY (FT)	38,364	153	0.4
<b>PENINSULAR MALAYSIA</b>	<b>13,189,061</b>	<b>1,748,610</b>	<b>13.3</b>

✚ In general, P. Malaysia – totalling more than 1.7 million hectares (protected area)

✚ About 13% of the country's land surface



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# PA's Managers in P. Malaysia

- Ownership and management of PA's - direct responsibility of the federal or state government
- There exist several legislative instruments that provide facilities to create PA and to gazette parks
- National parks are under the jurisdiction of the federal government while various states, under the Malaysian constitution, have jurisdiction over land and forests

 Department of Wildlife & National Park

 Forestry Dept Peninsular Malaysia

 Perak State Park Corp

 Johor State Park Corp

 Department of Marine Parks

 Fisheries Department



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# Management focus:

- ✚ Focused on the planning and implementation of various activities which contribute to the long-term conservation of the areas while mitigating/reducing conflicts between human & the environment
- ✚ The development of areas was done sustainably to ensure **optimum benefit to human** and prosperity to the environment for the present & future generation



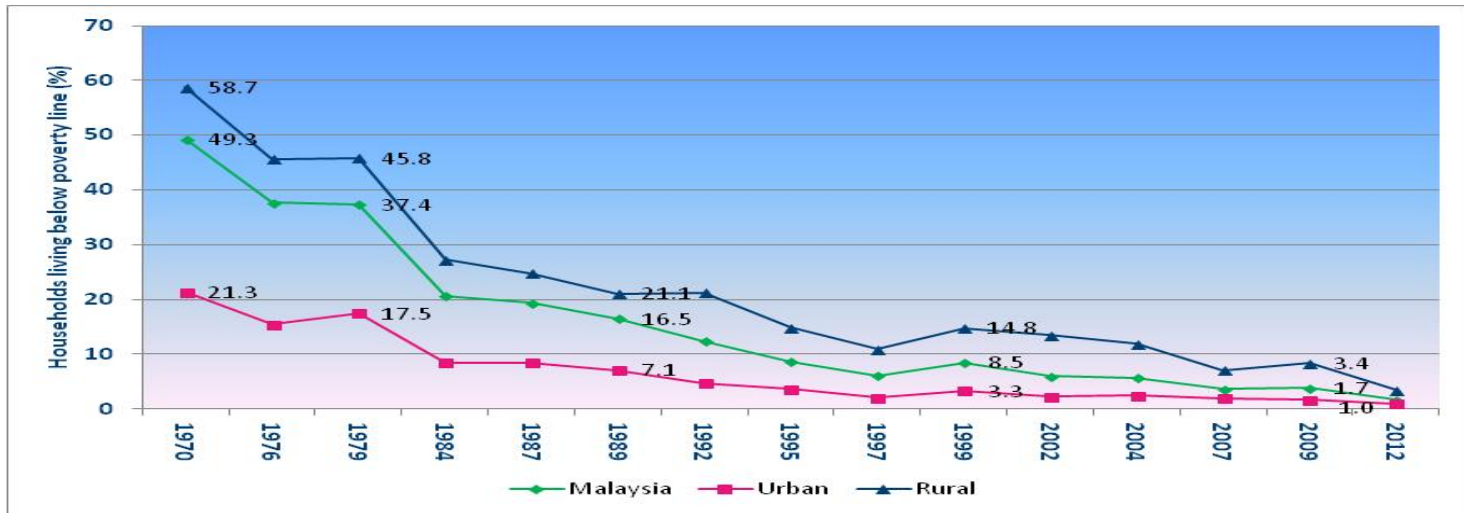
# Issue;



Whether introduction of these programme/systems helps to **improve income and alleviate rural poverty**

# Incidence of poverty, Malaysia

- ✚ Malaysia - incidence of poverty has reduced from 49% (1970) to 1.7% (2012), in 42 years
  - Rural areas declined from 59% to 3.4%
  - Urban areas from 21% to 1%



Source: Economic Planning Unit (EPU), Malaysia

- The significant reduction in poverty is a result of concerted government's efforts in implementing national development programmes to eradicate poverty
- Began - implementation of the New Economic Policy (1970-1990), continue after the NEP period via National Development Policy (1990-2000) and National Vision Policy (1991-2020)



# Case study (Socio-economic study)

## ✚ Main objective:

To assess the socio-economic impact of forest dependent community, especially in terms of **income generation & eradicating poverty**

## ✚ Methodology

Technique of data collection (2 main techniques)

- **rapid rural appraisal**; group discussion, ethno-histories, stories and taking-note
- **survey research**; a face-to-face interview survey (whereby the interviewers ask the questionnaire orally and record the respondents' answers)



# Studied villages



Survey - successfully conducted in 4 villages



8 enumerators involved



Conducted in the months of February & March 2014

## Villages surveyed

<i>Villages</i>	<i>Estimated households</i>	<i>Sampled households</i>	<i>% of household</i>
Kg. Kuala Tahan*	390	158	40.5
Kg. Kuala Koh**	27	12	44.4
Kg. Aring 5**	70	28	40.0
Kg. Sg. Berua**	100	43	43.0
<b>Total</b>	<b>587</b>	<b>241</b>	<b>41.1</b>

\*Traditional village

\*\*Orang Asli village



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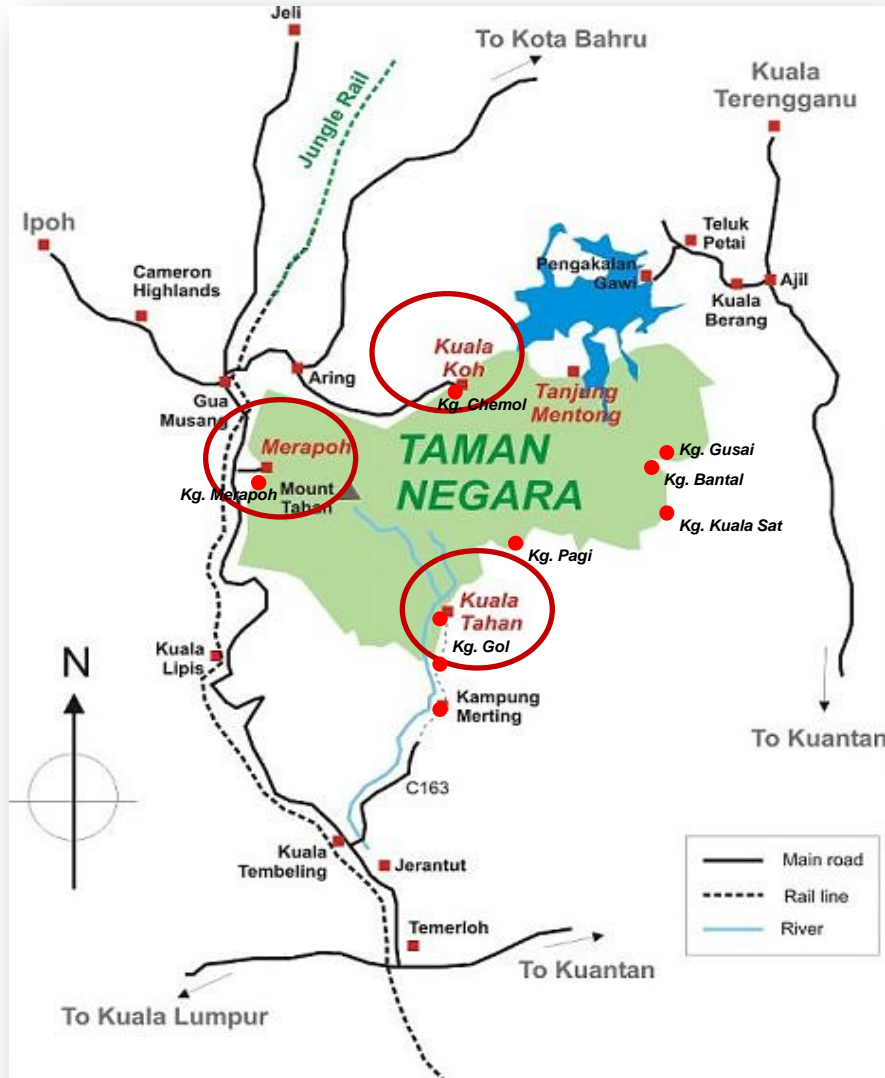


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# Map: Location of study area (traditional & Orang Asli villages)



*Kg. K. Tahan*



*Kg. Kuala Koh*



*Kg. Aring 5*



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# Results

## (level of average monthly household income)

- In 2014, the average monthly household income of four villages studied was **RM3,218**
- Lowest in Kg. Sg. Berua (RM1,337 a month)
- Highest in Kg. K. Tahan (RM4,035 a month)
- The income level is higher than that of the average household for Rural Malaysia (RM3,080)

<i>Villages</i>	<i>Average monthly household income (RM)</i>
Kg. Kuala Tahan	4,035
Kg. Kuala Koh	2,032
Kg. Aring 5	2,002
Kg. Sg. Berua	1,337
<b>Four villages</b>	<b>3,218</b>
Rural Malaysia (2012)	3,080
Malaysia (2012)	5,000

Source: Four villages - field data.  
Economic Planning Unit (EPU), Malaysia



**Cont.**

## Monthly household income by type of income

- On the whole, about 91% of the average monthly household income from the four villages was cash income while 9% income in kind

Village	Cash income		Income in kind		Total	
	RM	%	RM	%	RM	%
Kg. Kuala Tahan	3,646	90.4	388	9.6	4,035	100.0
Kg. Kuala Koh	1,800	88.6	232	11.4	2,032	100.0
Kg. Aring 5	1,870	93.4	131	6.6	2,002	100.0
Kg. Sg. Berua	1,268	94.9	69	5.1	1,337	100.0
<b>Four villages</b>	<b>2,924</b>	<b>90.9</b>	<b>294</b>	<b>9.1</b>	<b>3,218</b>	<b>100.0</b>

*Source: Four villages – field data.*

**Cont.**

# (Average monthly household income from forestry related activities)

- ✚ About RM1,683 (52%) of the average monthly household income is generated related to forestry activities
- ✚ The income generated - varies between the four villages
- ✚ Lowest (RM1,216) in K.Koh & highest (RM1,895) in K. Tahan

Village	Within PR/SL forest		Outside TN (forestry related)		Outside TN (non-forestry)		Total	
	RM	%	RM	%	RM	%	RM	%
Kg. Kuala Tahan	4	0.1	1,891	46.9	2,139	53.0	4,035	100
Kg. Kuala Koh	888	43.7	328	16.1	816	40.2	2,032	100
Kg. Aring 5	900	45.0	451	22.5	651	32.5	2,002	100
Kg. Sg. Berua	1,230	92.0	18	1.4	89	6.6	1,337	100
<b>All 4 villages</b>	<b>371</b>	<b>11.5</b>	<b>1,312</b>	<b>40.8</b>	<b>1,535</b>	<b>47.7</b>	<b>3,218</b>	<b>100</b>

Source: Four villages – field data.

# Sources of average monthly household income

Items	Village								4 village	
	Kg. K. Tahan		Kg. K. Koh		Kg. Aring 5		Kg. Sg. Berua		RM	%
	RM	%	RM	%	RM	%	RM	%		
<b>Within PR/SL Forests</b>										
NTFP harvested	4	0.1	871	42.9	900	45.0	1,230	92.0	370	11.5
Creative crafts	-	0.0	17	0.8	-	0.0	-	0.0	1	0.0
<b>Outside TN (forestry related)</b>										
Resort worker	295	7.3	-	0.0	68	3.4	-	0.0	202	6.3
Chalet operators	304	7.5	-	0.0	-	0.0	-	0.0	199	6.2
Homestay operators	19	0.5	-	0.0	-	0.0	-	0.0	12	0.4
Boatman	285	7.1	-	0.0	-	0.0	-	0.0	187	5.8
Tour guide	503	12.5	125	6.2	79	3.9	-	0.0	345	10.7
Retail store/restaurant operators	395	9.8	-	0.0	-	0.0	-	0.0	259	8.0
Fishing	23	0.6	50	2.5	216	10.8	-	0.0	43	1.3
Fish consumed *	58	1.4	148	7.3	80	4.0	14	1.0	57	1.8
Natural water consumed*	10	0.2	5	0.3	8	0.4	4	0.3	8	0.3
<b>Outside TN (non-forestry)</b>										
Mill worker	41	1.0	-	0.0	-	0.0	-	0.0	27	0.8
Salary (government)	624	15.5	-	0.0	121	6.1	-	0.0	423	13.2
Salary (private sector)	298	7.4	-	0.0	-	0.0	-	0.0	195	6.1
Contract worker	88	2.2	125	6.2	29	1.4	-	0.0	67	2.1
Others (makan gaji)	131	3.2	-	0.0	-	0.0	-	0.0	86	2.7
Petty trade	142	3.5	-	0.0	-	0.0	-	0.0	93	2.9
Others (self employed)	135	3.3	100	4.9	11	0.5	-	0.0	95	2.9
Vegetable farming	6	0.1	188	9.2	12	0.6	-	0.0	15	0.5
Paddy farming	10	0.3	-	0.0	-	0.0	-	0.0	7	0.2
Rubber tapper	116	2.9	54	2.7	115	5.7	-	0.0	92	2.9
Sales of oil palm	100	2.5	-	0.0	54	2.7	19	1.4	75	2.3
Orchard farming	4	0.1	13	0.6	188	9.4	12	0.9	27	0.9
Other cash (agriculture)	8	0.2	250	12.3	71	3.6	-	0.0	26	0.8
Remittance	39	1.0	-	0.0	7	0.4	-	0.0	27	0.8
Other cash (bonus, dividend, rental & etc)	75	1.9	8	0.4	-	0.0	8	0.6	51	1.6
Poultry and vegetable *	22	0.6	30	1.5	12	0.6	3	0.2	18	0.6
Imputed rent*	297	7.4	49	2.4	31	1.6	48	3.6	210	6.5
Other income inkind	1	0.0	-	0.0	-	0.0	-	0.0	1	0.0
<b>Total</b>	<b>4,035</b>	<b>100.0</b>	<b>2,032</b>	<b>100.0</b>	<b>2,002</b>	<b>100.0</b>	<b>1,337</b>	<b>100.0</b>	<b>3,218</b>	<b>100.0</b>

Source: Field data.

In total, highest percentage (cash income)  
- Forestry related activities, 50%

Kg. K. Tahan - 45%

Kg. K. Koh - 52%

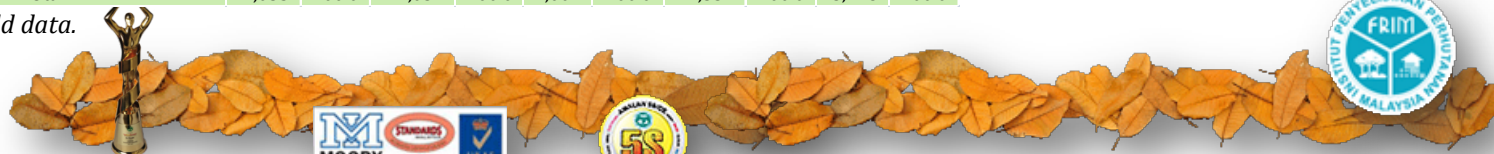
Kg. Aring 5 - 63%

Kg. Sg. Berua - 92%

Non-cash income - fish & natural water  
consumed (2%)

Cash income - 91%

Income in kind - 9%



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# Poverty eradication

- ✚ The extent of poverty among these local villagers could be indicated from the incidence of poverty among the households in the four villages
- ✚ Poverty - "is measured on the basis of a minimum expenditure level or the poverty line income (PLI) to separate the poor from non-poor"
- ✚ In 2010, the per capita PLI was RM197
- ✚ Taking into consideration the rise in the consumers' price index of about 9.7% between 2010 and 2014, the per capita PLI was calculated to be RM216 in 2014 and this used to measure the incidence of poverty among the four villages studied





# Incidence of poverty

- 4 villages averaged 17% in 2014 (ranging from 4.4% in Kg. Kuala Tahan to 51% in Kg. Sg. Berua)
- Poverty among villages adjacent to the TN area was relatively higher compared to 3.4% among all Rural Malaysian households in 2012

<i>Village</i>	<i>Total households</i>	<i>No. of poor households</i>	<i>Incidence of poverty (%)</i>
Kg. Kuala Tahan	158	7	4.4
Kg. Kuala Koh	12	5	41.7
Kg. Aring 5	28	7	25.0
Kg. Sg. Berua	43	22	51.2
<b>All four villages</b>	<b>241</b>	<b>41</b>	<b>17.0</b>
Rural Malaysia (2012)			3.4

*Source: Four villages – field data.  
Economic Planning Unit (EPU), Malaysia*

# Significance of income sources on poverty status

Income sources	Coefficient	S.E.	
<b>Within PR/SL Forests</b>			
<b>Outside TN (forestry related)</b>			
<b>Outside TN (non-forestry)</b>			
Mill worker	-0.00088	.000089	
Salary (government)	-0.00073	.000025	***
Salary (private sector)	-0.00002	.000038	
Contract worker	-0.00075	.000082	
Others (makan gaji)	-0.00029	.000059	
Petty trade	-0.00053	.000060	
Others (self employed)	.000032	.000049	
Vegetable farming	-0.00292	.000201	
Paddy farming	-0.00184	.000303	
Rubber tapper	-0.00077	.000074	
Sales of oil palm	-0.00147	.000077	*
Orchard farming	-0.00165	.000121	
Other cash (agriculture)	-0.00156	.000098	
Remittance	-0.00152	.000235	
Other cash (bonus, dividend, rental & etc)	-0.00121	.000128	

- ✚ Determined - relationship between the income sources attributes and poverty status
- ✚ Multiple regression test
- ✚ Income sources attributes - independent variables
- ✚ Poverty status - dependent variable
- ✚ Illustrated results - 4 of the 17 income sources attributes (cash income) are significant predictors of poverty status
- ✚ Overall, regression model accounted for approximately 22% of the variance associated with the poverty status

Response scale is 1= poor (percapita income  $\leq$ RM216), 0=non-poor (percapita income  $>$ RM216)

\* denotes significant at the 10% level ( $p < 0.10$ )

\*\*\* denotes significant at the 1% level ( $p < 0.01$ )



# Conclusion

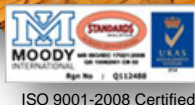
Income received from forestry related activities under PA system is important in eradicating poverty among local households



# Terima kasih



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