

# **Petaling Jaya Neighbourhood Lifestyle Survey**

Environmental Protection Society  
Malaysia

## **Background and overall objectives**

- A preliminary study on the Ecological Footprint analysis
- An investigation into the methodology and the primary and supporting data requirements
- A demonstration of an actual community footprint analysis
- A snapshot and analysis of the footprint an Malaysian urban community

## **The Footprint I**

The supply side is composed of the following main categories (all translated as global hectares):

- Fossil Energy Land
- Cropland
- Pasture
- Forest
- Built-up Land
- Fisheries

## **The Footprint II**

The demand side can be reflected by the following main categories

- Food – e.g. meat, vegetables
- Housing – e.g. type and size of housing
- Transportation – e.g. cars, public transportation
- Goods – e.g. consumer and household products
- Services – e.g. telephone, insurance etc.
- Waste – e.g. recyclables such as paper etc.

## Methodology I

- The assessment was based on the Household Ecological Footprint Calculator developed by Redefining Progress (RP) (version 3.2, 2003)
- The calculation table uses 98 data points to estimate the Ecological Footprint and reflects major consumption patterns in 6 categories:
  - Food – e.g. meat, vegetables
  - Housing – e.g. type and size of housing
  - Transportation – e.g. cars, public transportation
  - Goods – e.g. consumer and household products
  - Services – e.g. telephone, insurance etc.
  - Waste – e.g. recyclables such as paper etc.

## Methodology II

- A survey form was developed to gather data to provide input into this calculation table
- The design of the survey was aimed at making the exercise as simple as possible for the respondent, e.g.:
  - a. Fuel consumption for personal transport
    - RP Calculation table: 1. kilometers traveled, 2. Fuel efficiency
    - Survey form: 1. kilometers traveled, 2. Engine capacity
  - b. Kilowatt of electricity used per month
    - RP Calculation table: Kilowatt
    - Survey form: Electricity bill per month (RM)

## Methodology III

- Some data points were removed because it was felt that the required information was difficult to estimate e.g. amount of construction material for housing
- Respondents were required to fill-in up to 126 data points
- Data collected was then transformed where necessary for input back into the RP calculation table

## Methodology IV

- The resident associations (RAs) targeted were Section 1A, Damansara Jaya, Kota Damansara, MBPJ Staff Quarters
- First briefing and feedback session was conducted in Sept. 2006 with representatives from the RAs
- Second briefing and feedback was conducted in Oct. 2006 with representatives from the MBPJ Staff Quarters
- Survey forms were distributed beginning Oct. 2006 and collected by Dec. 2006
- A total of 36 survey forms were received from Section 1A, Damansara Jaya & MBPJ Staff Quarters

## A note on the final analysis...

- No local Malaysian supporting data was used except for values on electricity generation:

<u>Type</u>	<u>Oil</u>	<u>Coal</u>	<u>Gas</u>	<u>Hydro</u>	<u>Others</u>
2005	2.2	21.8	70.2	5.5	0.3

- Data collected on electrical consumer products were not used due to lack of secondary supporting data

## The Results I

- Average of 4 persons per household
- 63% of households were 'middle' income homes i.e. between RM1500 and RM4500 per month
- Average size of homes (living area) was 2078 square feet
- Average distance traveled by private cars was 1089 km per month per household
- Average amount of chicken consumed was 15 kg per month per household

## The Results II

- The average footprint was calculated at 5.2 global hectares per person
- The footprint ranged from 2.1 to 11.4 global hectares per person

## 5.2 global hectares per person

Consumption patterns:

- Food – 45%
- Housing – 16%
- Transportation – 13%
- Goods – 13%
- Services – 4%
- Waste – 10%

## 5.2 global hectares per person

Footprint categories:

- Fossil energy – 33%
- Cropland – 21%
- Pasture – 5%
- Forest – 18%
- Built-up Land – 1%
- Fisheries – 21%

## The Ecological Footprint per household member

	FOSSIL	CROPLAND	PASTURE	FOREST	BUILT-UP	FISHERIES	TOTAL
	ENERGY				LAND		
CATEGORIES	[gm2]	[gm2]	[gm2]	[gm2]	[gm2]	[gm2]	[gm2]
FOOD	444	9,540	2,408	0	0	11,070	23,462
HOUSING	4,164	0	0	4,258	6	0	8,428
TRANSPORTATION	6,099	0	0	0	523	0	6,622
GOODS	2,366	1,292	113	2,722	35	0	6,527
SERVICES	1,688	0	0	85	55	0	1,827
WASTE	2,612	0	0	2,399	39	0	5,050
<b>TOTAL</b>	<b>17,373</b>	<b>10,831</b>	<b>2,521</b>	<b>9,464</b>	<b>658</b>	<b>11,070</b>	<b>51,917</b>

## Some notes of the results...

- The assessment does not provide a complete picture of the footprint
- The results did not reflect a typical urban community
- A preliminary study: margin of error?

## Overall conclusion

- Calculating the footprint is a data intensive process
- Supporting data for local or regional values which is not available needs to be developed
- The community needs to sufficiently engaged to carry out a study such as this
- A method to make people aware of their consumption patterns and how it impacts the environment

# Thank you!

## Acknowledgements

Majlis Bandaraya Petaling Jaya  
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Section 1A, Damansara Jaya, Kota Damansara, MBPJ Staff  
Quarters  
EPSM Footprint Working Group

"The Footprinting methodology is the most ingenious way of communicating unsustainability to the general public - it goes directly to the point and through intuition it allows laypeople to 'get it'."

Karl-Henrik Robért  
Founder of The Natural Step