



## Status Development

# MY - LCID

Malaysia Life Cycle Inventory Database



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Malaysia

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## Presentation Contents

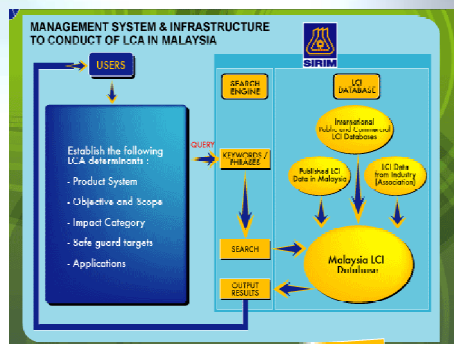
- ❑ Status of LCI Database - Malaysia
- ❑ The Needs for A National LCI Database
- ❑ Challenges in Database Development



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## National LCI Database - Malaysia



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## Stages of MYLCID Development

- ❑ Initial start-up of national LCI database – 9<sup>th</sup> Malaysia Plan (2005 -2010)  
Government's mandate to SIRIM (implementing agency)
- ❑ 2005 : Formation of a National LCA structure
- ❑ 2005 – 2007: Slow progress, low industries' reception, LCA studies mostly conducted by SIRIM
- ❑ 2007: alternative route to fast-track LCI database infrastructure development; tender out for external consultants
- ❑ Apr 2008 – Jan 2009: contract awarded to a foreign consultant (PE Engineering, Germany)
- ❑ SIRIM selected & specified datasets relevance to Malaysian industrial needs (local production, total import, mixed production & import)
- ❑ ~150 regionalised LCI datasets (use own local electricity, water, fuel data)



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## Stages of MYLCID Development

- ❑ Breakdown of datasets by category:

| Category                     | No of Datasets |
|------------------------------|----------------|
| Energy carriers & technology | 20             |
| Material production          | 74             |
| Systems                      | 58             |
| Transport Services           | 5              |

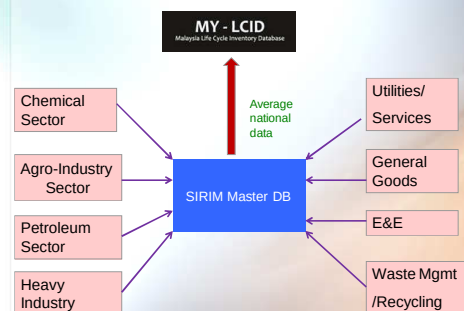
- ❑ Basis for LCI infrastructure framework
- ❑ Datasets expansion/replacement – actual site/industrial data collection in progress



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## LCI Database Working Structure



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| No  | LCI Project Name                           | No  | LCI Project Name          | No  | LCI Project Name                  |
|-----|--------------------------------------------|-----|---------------------------|-----|-----------------------------------|
| 1.  | Electricity                                | 16. | Butanol                   | 31. | Alum                              |
| 2.  | Water Supply                               | 17. | Ethylene and co-products  | 32. | Treatment of Hazardous Waste      |
| 3.  | Crude Steel /billet                        | 18. | HDPE                      | 33. | Treatment of Solid Waste by RDF   |
| 4.  | Hot Briquetted Iron /HBI                   | 19. | PVC                       | 34. | Landfill of Solid Waste           |
| 5.  | Hot Rolled Long Products                   | 20. | Petrochemical Derivatives | 35. | Marine Transports                 |
| 6.  | Cold-rolled Long Products                  | 21. | Natural Gas Products      | 36. | Road Transports                   |
| 7.  | Aluminium sheet                            | 22. | Ammonia                   | 37. | Plastic Pellets                   |
| 8.  | Printed Circuit Board 0.01 m2 double layer | 23. | Urea                      | 38. | Vacuum cleaner –plastic body part |
| 9.  | Air conditioner 1 HP                       | 24. | PET Bottle 1 unit 500ml   | 39. | Plastic Films                     |
| 10. | Ballast                                    | 25. | Corrugated Paper Products | 40. | Shower Bottle                     |
| 11. | Integrated Circuit                         | 26. | Batik                     |     |                                   |
| 12. | Gold Plated sheet                          | 27. | Crude Palm Oil            |     |                                   |
| 13. | Crude oil extraction                       | 28. | Biodiesel                 |     |                                   |
| 14. | Natural gas extraction                     | 29. | Latex                     |     |                                   |
| 15. | Diesel                                     | 30. | Sulphuric acid            |     |                                   |

SIRIM LCI Studies

- Cradle to gate GHG gas profiling
- Next action plan -eutrophication, resource depletion, acidification

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Malaysia Life Cycle Inventory Database

Malaysia Life Cycle Inventory Database is developed in line with the Malaysian Government's mandate to SIRIM Berhad under the 9th Malaysia Plan (2006-2010) which is part of the National Life Cycle Assessment (LCA) initiative. The database will be used to conduct life cycle assessment studies, support the National Eco-labelling Programme and fulfil the requirements of foreign legislation that demand evidence on the control measures taken to reduce environmental impact of products and services throughout their life cycle.



Login :  
  
Password :



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[LCI Data Sets \(by Category\)](#) | [Search Data Sets](#) | [Logout](#)

### LCI data sets

View and download

Browse and view data sets (by category)

You can show the sub-categories by clicking on the + sign on the left of the category entry. To list all ELCD data sets of a shown sub-category, just click on the name of the sub-category.

By clicking on an individual data set, it opens in an overview window from where you can open the full data set including meta documentation and inventory.

|                                  |    |
|----------------------------------|----|
| Energy carriers and technologies | 20 |
| Materials production             | 74 |
| Systems                          | 58 |
| Transport services               | 5  |

Download data sets

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### Home

The Malaysian Life Cycle Inventory Database is a mandate from the Government of Malaysia under the Ninth Malaysia Plan. The Database will be used to conduct life cycle assessment studies, support the National Eco-labelling Programme and fulfil the requirements of foreign legislation that demand evidence on the control measures taken to reduce environmental impact of products and services throughout their life cycle.



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|                                         |           |
|-----------------------------------------|-----------|
| <b>Energy carriers and technologies</b> | <b>20</b> |
| <b>Materials production</b>             | <b>74</b> |
| Metals and alloys                       | 17        |
| Other materials                         | 8         |
| Metals and alloys                       | 16        |
| Other materials                         | 20        |
| Energy carriers and technologies        | 4         |
| Other materials                         | 7         |
| Other materials                         | 1         |
| <b>Systems</b>                          | <b>58</b> |
| Electricity                             | 42        |
| Other systems                           | 16        |
| <b>Transport services</b>               | <b>5</b>  |
| Air                                     | 3         |
| Sea                                     | 1         |
| Other                                   | 1         |

### MY - LCID

Malaysia Life Cycle Inventory Database

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**LCI data sets**

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|                                         |           |
|-----------------------------------------|-----------|
| <b>Energy carriers and technologies</b> | <b>20</b> |
| Metals and alloys                       | 8         |
| Other materials                         | 1         |
| Metals and alloys                       | 16        |
| Other materials                         | 4         |
| Energy carriers and technologies        | 2         |
| Other materials                         | 7         |
| Other materials                         | 1         |
| <b>Materials production</b>             | <b>74</b> |
| <b>Systems</b>                          | <b>58</b> |
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LCI Data Sets (by Category) | Search Data Sets | Logout

**Data set search form**

Please enter your search terms and options. They will be interpreted as additive search conditions. To include all options just leave all possible entries unselected (default). **Note:** To de-select a search term, which you have previously selected in the pulldown-lists, use left-mouse-click on the term while pressing "Ctrl".

**Full text search in name and description of dataset**

Search terms:  don't search in description: ☒

**Geographical and time coverage of dataset**

Geographical Coverage:  Reference year: between  and

**Type of dataset**

type of dataset:  parameterised: ☐

**Category of dataset**

Categories to search for:  Select categories from this list:

### MY - LCID

Malaysia Life Cycle Inventory Database

LCI Data Sets (by Category) | Search Data Sets | Logout

**List of selected data sets**

This page lists the data sets for your search or chosen index category. Click on the name of the data set to see the description of the data set.

| Location | Name of Process or LCI result set                                                                                                    | Category                                                 | Reference year | Parameterised? |
|----------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------|----------------|
| MY       | <u>Natural gas from offshore and onshore production, pipeline and LDC transport (consumption only, at industrial, technological)</u> | Energy carriers and technologies/Natural gas based fuels | 2002           | no             |
| MY       | <u>Power from natural gas, consumption only, at power plant 100-1000</u>                                                             | Energy carriers and technologies/Electricity             | 2005           | no             |
| MY       | <u>Electricity from natural gas, consumption only, at power plant 100-1000</u>                                                       | Energy carriers and technologies/Heat and steam          | 2002           | no             |

LCI Data Sets (by Category) | Search Data Sets | Logout

**Data set overview page**

Data set: Natural gas mix

|                                                                      |                   |                         |                                           |                            |                        |                      |         |
|----------------------------------------------------------------------|-------------------|-------------------------|-------------------------------------------|----------------------------|------------------------|----------------------|---------|
| Type of process: LCI result                                          | Parameterised: no | Reference year: LCI 1.1 | Geographical coverage: LCI compliance 1.1 | Industrial use: industrial | Database: get (update) | Language: Indonesian | English |
| Category: Energy carriers and technologies (Natural gas based fuels) | Parameterised: no | Reference year: 2002    | Geographical coverage: Global             | Industrial use: industrial | Database: get (update) | Language: Indonesian | English |

**One entry for dataset:**  
The data set can be used by power plants, industries and consumers. Contribution with industrial and processes using the natural gas mix enables the generation of user-specific products LCIs.

**Reference year:**  
2002

**Geographical coverage:**  
Global

**Industrial use:**  
Industrial

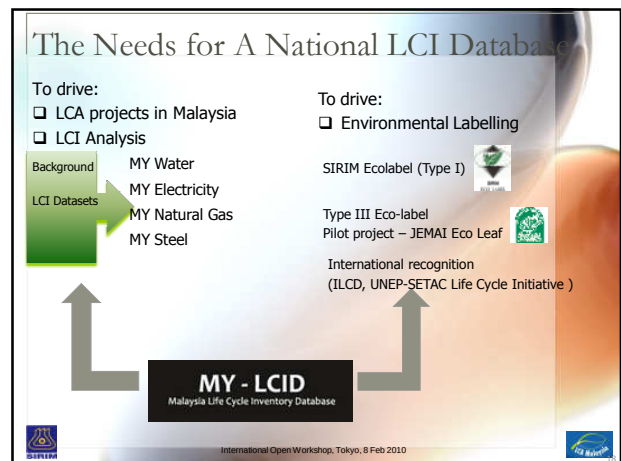
**Database:**  
get (update)

**Language:**  
Indonesian

**English:**  
English

**Dependent internal review by UNEP Global Ecolabel Partnership:**

**Internal review:**  
The internal review was done by several function topics concerning raw data validation, raw data documentation, responsibility, completeness and consistency of modelling with respect to ISO 14040 and 14044. Documentation: The review of the documentation was performed by Ecolabel and is in compliance with ISO 14040 and 14044. The data set documentation is complete in view of the appropriateness of the information provided. It includes all relevant information in view of data quality and scope of application of the respective LCI result.



## Challenges in Database Development

- ❑ Industry collaboration to provide foreground data involving own industrial processes
- ❑ Dealing with business confidential information
- ❑ Developing LCI datasets that representing the national average
- ❑ International acceptable of our LCI datasets
- ❑ LCA beyond research & academic activities – application of LCA to actual industrial practices for production of eco-products/systems/services



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## Challenges in Database Development

### Malaysia Life Cycle Inventory Database



- ❑ national launching by end 2010
- ❑ industries / associations driven development (*industry provided data*)

*A National Initiative for the Development of Eco-Friendly Products and Services*



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**Terima Kasih  
Thank you!**

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