CLEAN DEVELOPMENT MECHANISM
SMALL-SCALE PROGRAM ACTIVITY DESIGN DOCUMENT FORM (CDM-SSC-CPA-DD)
Version 01

CONTENTS

Annexes

NOTE:

(i) This form is for submission of CPAs that apply a small scale approved methodology using the provision of the proposed small scale CDM PoA.

(ii) The coordinating/managing entity shall prepare a CDM Small Scale Programme Activity Design Document (CDM-SSC-CPA-DD)[1,2] that is specified to the proposed PoA by using the provisions stated in the SSC PoA DD. At the time of requesting registration the SSC PoA DD must be accompanied by a CDM-SSC CPA-DD form that has been specified for the proposed SSC PoA, as well as by one completed CDM-SSC CPA-DD (using a real case). After the first CPA, every CPA that is added over time to the SSC PoA must submit a completed CDM-SSC CPA-DD.

[1] The latest version of the template form CDM-CPA-DD is available on the UNFCCC CDM web site in the reference/document section.

[2] At the time of requesting validation/registration, the coordinating managing entity is required to submit a completed CDM-POA-DD, the PoA specific CDM-CPA-DD, as well as one of such CDM-CPA-DD completed (using a real case).

SECTION A. General description of small scale CDM programme activity (CPA)

A.1. Title of the small-scale CPA:

Nittsu Fuel Efficiency Improvement Programme Activity with Digital Tachograph Systems on Road Freight Transportation in Malaysia

Version 01.3
Date of completion 06/01/2012

A.3. Entity/individual responsible for the small-scale CPA:

Nippon Express (Malaysia) Sdn.Bhd.; or

Nittsu Transport Service (M) Sdn. Bhd. ("NTS"); or

other affiliate/subsidiary of Nittsu

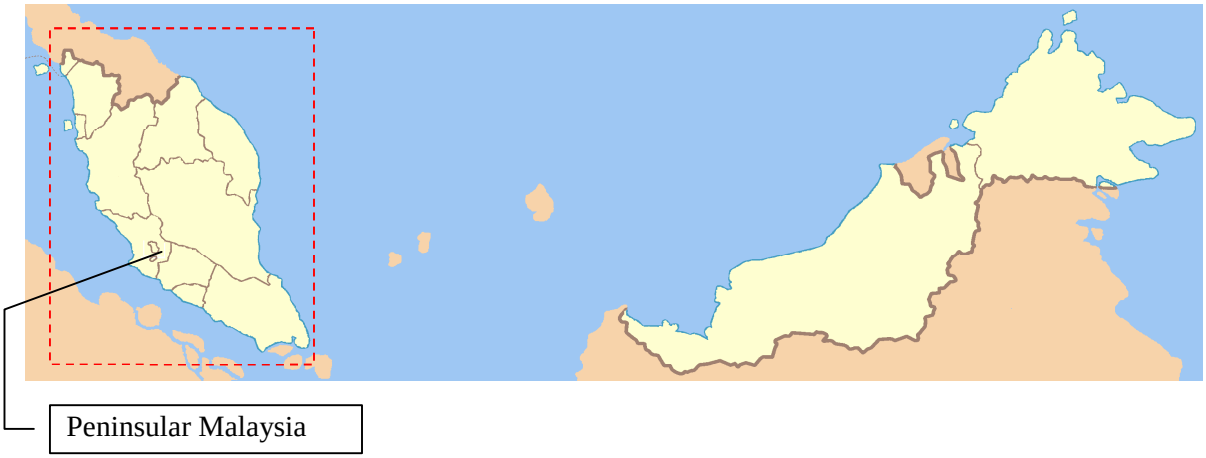
A.4. Technical description of the small-scale CPA:

A.4.1. Identification of the small-scale CPA:

A.4.1.1. Host Party:

Malaysia

A.4.1.2. Geographic reference or other means of identification allowing the unique identification of the small-scale CPA (maximum one page):



A.4.2. Duration of the small-scale CPA:

A.4.2.1. Starting date of the small-scale CPA:

DD/MM/YYYY

A.4.2.2. Expected operational lifetime of the small-scale CPA:

NN years NN months

A.4.3. Choice of the crediting period and related information:

Renewable crediting period; or

Fixed Crediting period

[Delete the one that is not applicable]

A.4.3.1. Starting date of the crediting period:

DD/MM/YYYY

A.4.3.2. Length of the crediting period, first crediting period if the choice is renewable CP:

NN years NN months

A.4.4. Estimated amount of emission reductions over the chosen crediting period:

Year	Annual estimation of emission reductions in tonnes of CO2e
1	Left blank on purpose
2	
3	
4	
5	
6	
7	
Total estimated reductions (tonnes of CO2e)	

Total number of crediting years	**7/10**
Annual average over the crediting period of estimated reductions	

A.4.5. Public funding of the CPA:

No public funding from Annex 1 Parties is involved.

A.4.6. Information to confirm that the proposed small-scale CPA is not a de-bundled component

Each of the independent measures included in this SSC-CPA is no larger than 600 t CO_2 equivalent (1% of the small-scale threshold defined by the methodology), therefore this SSC-CPA is exempted from performing the debundling check.

A.4.7. Confirmation that small-scale CPA is neither registered as an individual CDM project activity or is part of another Registered PoA:

This small-scale CPA is neither registered as an individual CDM project activity or is part of another Registered PoA.

SECTION B. Eligibility of small-scale CPA and Estimation of emissions reductions

B.1. Title and reference of the Registered PoA to which small-scale CPA is added:

Nittsu Fuel Efficiency Improvement Programme with Digital Tachograph Systems on Road Freight Transportation in Malaysia

B.2. Justification of the why the small-scale CPA is eligible to be included in the Registered PoA :

PoA eligibility criteria	*Proposed SSC-CPA*
The geographical boundary of the SSC-CPA including any time-induced boundary consistent with the geographical boundary set in the PoA, that is Peninsular Malaysia	Left blank on purpose
Unique identifications of digital tachographs and freight trucks avoid double counting of emission reductions	
The specifications of technology/measure employed by a SSC-CPA comply with requirements of AMS-III.AT (Version 01)	
The start date of the SSC-CPA, which is the date the feedback mechanisms of the digital tachograph	

systems are implemented, is recorded in the monitoring system and determined to be on or after the PoA start date	
An SSC-CPA complies with applicability and other requirements of AMS-III.AT (Version 01) applied by the SSC-CPA	
The SSC-CPA meets the requirements pertaining to the demonstration of additionality from all the relevant requirements of the Attachment A to Appendix B of the "Simplified modalities and procedures for small-scale CDM project activities"	
Conditions related local stakeholder consultations and environmental impact analysis are consistent with the PoA	
The SSC-CPA involves direct installation of digital tachograph systems to commercial freight transport vehicles	
The SSC-CPA in aggregate meets the small-scale threshold criteria that the emission reductions every year will not go beyond the limit of 60 $ktCO_2e/y$ and remain within this threshold throughout the crediting period of the SSC-CPA	
Each of the independent subsystems/measures (i.e., digital tachograph system) included in the SSC-CPA of a PoA is no larger than 1% of the small-scale threshold defined by the methodology applied, therefore the SSC-CPA is exempted from performing de-bundling check	
Funding from Annex I parties, if any, does not result in a diversion of official development assistance	

B.3. Assessment and demonstration of additionality of the small-scale CPA , as per eligibility criteria listed in the Registered PoA:

As per additionality criteria listed in the PoA-DD:

PoA additionality criteria	*Proposed SSC-CPA*
There is no regulatory or policy requirement for the implementation of the Programme technology;	Left blank on purpose
The use of digital tachograph systems for transport efficiency is not the prevailing practice for road freight transport.	

B.4. Description of the sources and gases included in the project boundary and proof that the small-scale CPA is located within the geographical boundary of the registered PoA.

Sources and gases included in the project boundary

	Source	Gas	Inclusion	Justification/Explanation
Baseline	Fossil fuel consumption for road transport of freight in the business as usual (BAU) scenario	CO_2	Yes	Main source of emissions.
		CH_4	No	Negligible. This is conservative.
		N_2O	No	Negligible. This is conservative.
Project activity	Fossil fuel consumption for the transport of freight in trucks installed with digital tachograph systems	CO_2	Yes	Main source of emissions.
		CH_4	No	Negligible. This is conservative.
		N_2O	No	Negligible. This is conservative.

Proof that the SSC-CPA is located within the geographical boundary of the registered PoA

As per AMS-III.AT (Version 01), the geographical area covering the traceable physical routes along which the vehicles of the SSC-CPA operate and the auxiliary facilities visited by the vehicles is the geographical boundary set in Section A.4.1.2 of the SSC-PoA-DD, that is Peninsular Malaysia.

Shown in the following figure are the routes' main classifications:
1. Thai Border
2. Northern Kedah
3. Penang and Southern Kedah
4. Ipoh
5. Kuantan/Pahang
6. Kelang Valley
7. Senawang and Seremban
8. Melaka and Muar
9. Johor
10. Singapore
11. Thailand

Routes classified under "Singapore" are those passing the Malaysia-Singapore border. Singapore is outside the geographical boundary of the PoA, so emission reductions will only be claimed for the section of trip that occurs in Malaysia. Meanwhile, routes classified under "Thailand" are for freight to/from Thailand. The trucks however, do not cross into Thailand; the trucks unload the freight at the Malaysia-Thailand border and return, thus the travel for these trucks still occur wholly within Malaysia.

Time-induced boundary

The freight trucks comprising the CPA are limited to those listed in that CPA. Emission reductions for a single truck will cease to be claimed at the end of operational lifetime of that truck, and any replacement for that retired truck must be listed in its own CPA.

B.5. Emission reductions:

B.5.1. Data and parameters that are available at validation:

Fixed parametric values

Data / Parameter:	$\eta_{BLV,i}$
Data unit:	(l/km)
Description:	Efficiency of vehicle *i* under baseline conditions
Source of data used:	Fuel depot data and truck distance data
Value applied:	Left blank on purpose
Justification of the choice of data or description of measurement methods and procedures actually applied :	Procedures are described in SSC-PoA-DD Section E.6.1. Fuel consumed and distances travelled while trucks are in Singapore are discounted.
Any comment:	Left blank on purpose

Data / Parameter:	P_i
Data unit:	(t)
Description:	Total annual goods transported by each vehicle under baseline conditions
Source of data used:	Delivery data
Value applied:	Left blank on purpose
Justification of the choice of data or description of measurement methods and procedures actually applied :	Goods transported while the trucks are in Singapore are discounted.
Any comment:	Left blank on purpose

Data / Parameter:	D_i
Data unit:	(km)
Description:	Total distance travelled by each vehicle under baseline conditions
Source of data used:	GPS route tracing data
Value applied:	Left blank on purpose
Justification of the choice of data or description of measurement methods and procedures actually applied :	Distances travelled while trucks are in Singapore are discounted.
Any comment:	Left blank on purpose

Data / Parameter:	dp_i
Data unit:	(km)
Description:	Average distance of transportation per tonne of freight by each vehicle *i* under baseline conditions
Source of data used:	Calculated through company records
Value applied:	Left blank on purpose
Justification of the choice of data or description of measurement methods and procedures actually applied :	The annual average distance of transportation per tonne of freight is calculated using the formula: $dp_i = \frac{D_i^2}{\sum_{m=1}^{\infty} d_i \times p_i}$ Distances travelled and goods transported while trucks are in Singapore are discounted.
Any comment:	Left blank on purpose

Data / Parameter:	$SL_{BL,k}$
Data unit:	(t-km)
Description:	Service level in terms of volume of goods times the average distance of transportation per tonne of freight by truck class *k* before the beginning of the project
Source of data used:	Determined from company/operators records, e.g. driver logs and route maps, plus delivery receipts
Value applied:	
Justification of the choice of data or description of measurement methods and procedures actually applied :	Goods transported while the trucks are in Singapore are discounted.
Any comment:	Service level determined by weight of goods times the average distance of transportation tonne of freight ($SL_{k,y}$) shall be capped at baseline level ($SL_{BL,k}$). Emission reductions beyond this level will not be counted.

Data and parameters that are be reported in CDM-SSC-CPA-DD form

Data / Parameter:	NCV_j
Data unit:	(TJ/l)
Description:	Net calorific value of fuel
Source of data to be used:	Country specific data or IPCC default value
Value of data applied for the purpose of	Left blank on purpose

calculating expected emission reductions in section B.5	
Description of measurement methods and procedures to be applied:	The value is checked annually from (a) fuel supplier(s).
QA/QC procedures to be applied:	Left blank on purpose
Any comment:	Left blank on purpose

Data / Parameter:	$EF_{CO2,j}$
Data unit:	(tCO_2/TJ)
Description:	CO_2 emission factor of fuel used by vehicle
Source of data to be used:	Country specific data or IPCC default value
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Left blank on purpose
Description of measurement methods and procedures to be applied:	Left blank on purpose
QA/QC procedures to be applied:	Left blank on purpose
Any comment:	Left blank on purpose

Data / Parameter:	SL_y
Data unit:	(t-km)
Description:	Service level in terms of volume of goods times the average distance of transportation per tonne of freight in year *y*
Source of data to be used:	Monitored for each truck, from company/operators records, e.g. driver logs and route maps, plus delivery receipts
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Left blank on purpose
Description of measurement methods and procedures to be applied:	
QA/QC procedures to be applied:	

Any comment:	Left blank on purpose

Data / Parameter:	-
Data unit:	-
Description:	Annual monitoring to check if tachograph systems have become a mandatory practice, or that highly-enforced anti-idling policies or legislation have been put into place
Source of data to be used:	
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Tachograph systems are not mandatory practice
Description of measurement methods and procedures to be applied:	
QA/QC procedures to be applied:	
Any comment:	Left blank on purpose

Data / Parameter:	-
Data unit:	-
Description:	Monitoring to ensure that all tachograph and feedback systems are operating correctly and have not been disabled
Source of data to be used:	
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Tachograph and feedback systems are operating correctly and have not been disabled
Description of measurement methods and procedures to be applied:	
QA/QC procedures to be applied:	
Any comment:	If any tachograph system installed in a project vehicle is not operating correctly, no emissions reductions can be attributed to that vehicle for the period that the system has not been operating correctly

B.5.2. Ex-ante calculation of emission reductions:

$$BEF_i = \frac{\sum_j D_i * \eta_{BLVi} * NCV_j * EF_{CO2,j}}{P_i * dp_i} \quad \textbf{(1)}$$

Where:

BEF_i	Baseline emission factor per tonne of goods per kilometre for vehicle *i* under baseline conditions (tCO_2/t-km)
P_i	Total annual weight of goods transported by each vehicle *i* under baseline conditions (t)
dp_i	The annual average distance of transportation per tonne of freight by each vehicle *i* under baseline conditions (km)
D_i	Total annual distance travelled by each vehicle *i* under baseline conditions (km)
η_{BLVi}	Fuel efficiency of vehicle *i* under baseline conditions (l/km)
NCV_j	Net calorific value of fuel *j* (TJ/l)
$EF_{CO2,j}$	CO_2 emission factor of fuel *j* used by vehicle (tCO_2/TJ, country specific data or IPCC default value)

The total baseline emissions are calculated on an annual basis using the monitored data as described below.

$$BE_y = \sum P_{i,y} \times BEF_i \times dp_{i,y} \quad \textbf{(2)}$$

Where:

BE_y	Total baseline emissions in year *y* (tCO_2/yr)
$P_{i,y}$	Total annual weight of goods transported by each project vehicle *i* in year *y* on each traceable route (t)
BEF_i	Baseline emission factor per tonne of goods per kilometre for vehicle *i* (tCO_2/t-km) under baseline conditions
$dp_{i,y}$	Annual average distance of transportation per tonne of goods by project vehicle *i* in year *y* (km)

Leakage

No leakage calculation is required, even when applying to a CPA under a programme of activities.

Project activity emissions

Project emissions are determined by monitoring the consumption of fuel or energy consumed by the vehicles introduced, according to the following formula:

$$PE_y = \sum_j \sum_i FC_{i,j,y} * NCV_j * EF_{CO2,j} \quad \textbf{(3)}$$

Where:

PE_y	Total project emissions in year *y* (tCO_2/yr)
$FC_{i,j,y}$	Consumption of fuel *j* by vehicle *i* in year *y* (l)
NCV_j	Net calorific value of fuel *j* (TJ/l, as obtained by country specific data or IPCC default value)
$EF_{CO2,j}$	CO_2 emission factor of fuel *j* used by vehicle *i* under baseline conditions (tCO_2/TJ, country specific data or IPCC default value)

B.5.3. Summary of the ex-ante estimation of emission reductions:

Year	Estimation of project activity emissions (tonnes of CO_2 e)	Estimation of baseline emissions (tonnes of CO_2 e)	Estimation of leakage (tonnes of CO_2 e)	Estimation of overall emission reductions (tonnes of CO_2 e)
1	Left blank on purpose			
2				
3				
4				
5				
6				
7				
Total (tonnes of CO_2 e)				

B.6. Application of the monitoring methodology and description of the monitoring plan:

B.6.1. Description of the monitoring plan:

Data and parameters monitored by each SSC-CPA

Data / Parameter:	$DT_{i,y}$
Data unit:	(km)
Description:	Total distance travelled by each vehicle *i* in year *y*
Source of data to be used:	Driver logs and route maps, recorded by GPS tracking system

Value of data applied for the purpose of calculating expected emission reductions in section B.5	Left blank on purpose
Description of measurement methods and procedures to be applied:	Distances travelled while the trucks are in Singapore are discounted.
QA/QC procedures to be applied:	
Any comment:	Left blank on purpose

Data / Parameter:	*i*
Data unit:	-
Description:	The trucks identified based on the age, characteristics and load capacity and availability of historical data
Source of data to be used:	Company records
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Left blank on purpose
Description of measurement methods and procedures to be applied:	The data are periodically checked on annual basis and recorded electronically
QA/QC procedures to be applied:	
Any comment:	Left blank on purpose

Data / Parameter:	$dp_{i,y}$
Data unit:	(km)
Description:	Annual average distance of transportation per tonne of freight by each project vehicle *i*
Source of data to be used:	Company records
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Left blank on purpose
Description of measurement methods and procedures to be	Distances travelled and goods transported while the trucks are in Singapore will be discounted.

applied:	
QA/QC procedures to be applied:	
Any comment:	Left blank on purpose

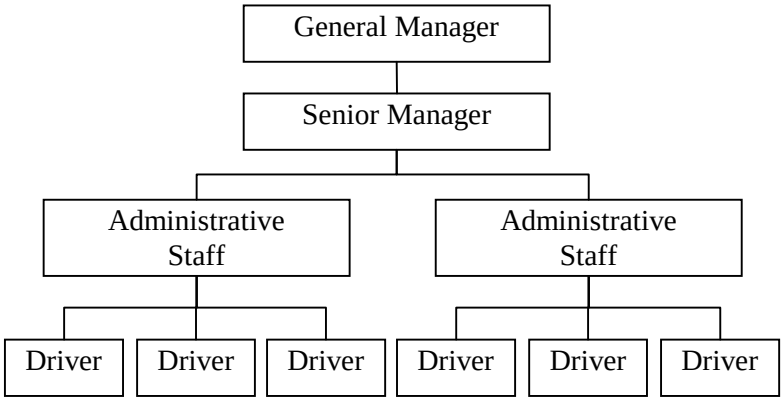
Data / Parameter:	$FC_{i,j,y}$
Data unit:	(l)
Description:	Consumption of fuel *j* by vehicle *i* in year *y*
Source of data to be used:	Fuel depot records
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Left blank on purpose
Description of measurement methods and procedures to be applied:	Fuel consumed while the trucks are in Singapore will be discounted.
QA/QC procedures to be applied:	
Any comment:	Left blank on purpose

Data / Parameter:	$P_{i,y}$
Data unit:	(t)
Description:	Total annual goods transported by each project vehicle in year *y*
Source of data to be used:	Monitored data during the project e.g. driver logs, plus delivery receipts
Value of data applied for the purpose of calculating expected emission reductions in section B.5	Left blank on purpose
Description of measurement methods and procedures to be applied:	Goods transported while the trucks are in Singapore will be discounted.
QA/QC procedures to be applied:	
Any comment:	Left blank on purpose

Operational and management plan

The monitoring scheme will be implemented following the structure:

NITTSU TRANSPORT SERVICE



The General Manager will be the authority that is responsible for the management and operation of the project activity which includes the monitoring of the parameters, as listed in section B.6.1, required for the emission reduction calculation.

The Senior Manager will be responsible for the management of the team of Administrative Staff. The Senior Manager's responsibilities include:

- To review and approve the monthly monitoring report
- To review and approve the regular training plan
- To ensure the corrective actions for erroneous measurements and uncertainty

The Administrative Staff will be responsible for the supervision of the Drivers and the review of the monitored parameters. Administrative Staff's responsibilities include:

- To review the daily recorded parameters and report aggregated data to the Senior Manager on a monthly basis
- To prepare/conduct the personalised training plans for the drivers
- To initiate the corrective actions for any erroneous measurement and uncertainty found
- To compile and archive data for at least two years

All data are transmitted by the digital tachographs to the operations center.

Monitored parameters and experiment results will be recorded using software as per instructed by the provider of the digital tachograph systems. To ensure the proper operation and maintenance of the project activity, training to the Administrative Staff and Drivers will be provided to the supervisors by the technology providers.

C.1. Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken:

☑ Please tick if this information is provided at the PoA level. In this case sections C.2. and C.3. need not be completed in this form.

C.2. Documentation on the analysis of the environmental impacts, including transboundary impacts:

n/a

C.3. Please state whether an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA), in accordance with the host Party laws/regulations:

n/a

SECTION D. Stakeholders' comments

D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:

☑ Please tick if this information is provided at the PoA level. In this case sections D.2. to D.4. need not be completed in this form.

D.2. Brief description how comments by local stakeholders have been invited and compiled:

n/a

D.3. Summary of the comments received:

n/a

D.4. Report on how due account was taken of any comments received:

n/a

Annex 1

CONTACT INFORMATION ON ENTITY/INDIVIDUAL RESPONSIBLE FOR THE SMALL-SCALE CPA

Organization:	Nittsu Transport Service (M) Sdn.Bhd.
Street/P.O.Box:	Lot 4286, Batu 12, Jalan Balakong
Building:	
City:	Seri Kembangan
State/Region:	Salangor Darul Ehsan
Postfix/ZIP:	43300
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Represented by:	Atsuko Mimori
Title:	
Salutation:	Ms.
Last Name:	Mimori
Middle Name:	
First Name:	Atsuko
Department:	Customer Service & Sales Department
Mobile:	
Direct FAX:	
Direct tel:	
Personal E-Mail:	

Annex 2

INFORMATION REGARDING PUBLIC FUNDING

No public funding from Annex 1 Parties is involved.

Annex 3

BASELINE INFORMATION

Left blank on purpose.

Annex 4

MONITORING INFORMATION

Left blank on purpose.

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