NTM

Network for Transport and Environment

NTM progress with regard to performance assessment

- Methodologies
- Data
- Tools

Magnus Swahn

The origin of NTM - 1993

Foto: Peter Nordahl

Konferens för miljön

– Det är dags att vi lyfter oss ur symboldiskussionernas träsk och ägnar oss åt de faktiska miljöproblemen, sa kommunikationsminister Mats Odell på en konferens med temat "Godstransporter och miljö" som ägde rum tisdagen den 23 november.

Konferensen anordnades gemensamt av ASG, Bilspedtion, Sveriges Speditörförbund, Svenska åkeriförbundet, Sveriges Redareförening, SJ Gods och SAS Cargo. Under dagen belystes de olika transportslagens syn på miljöfrågorna samt även Kommunikationsdepartementets, Miljödepartementets och Det Naturliga Stegets åsikter om transporter och miljö. Som avslutning enades man om att skapa ett nätverk för transportsektorn på miljöområdet.

Åsa Lindell, Bilspedition, Mats Odell, kommunikationsminister och Magnus Swahn, ASG AB är överens om att miljöfrågorna är viktiga för transportsektorn.

Anna Granholm

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www.ntmcalc.org

Performance assessment

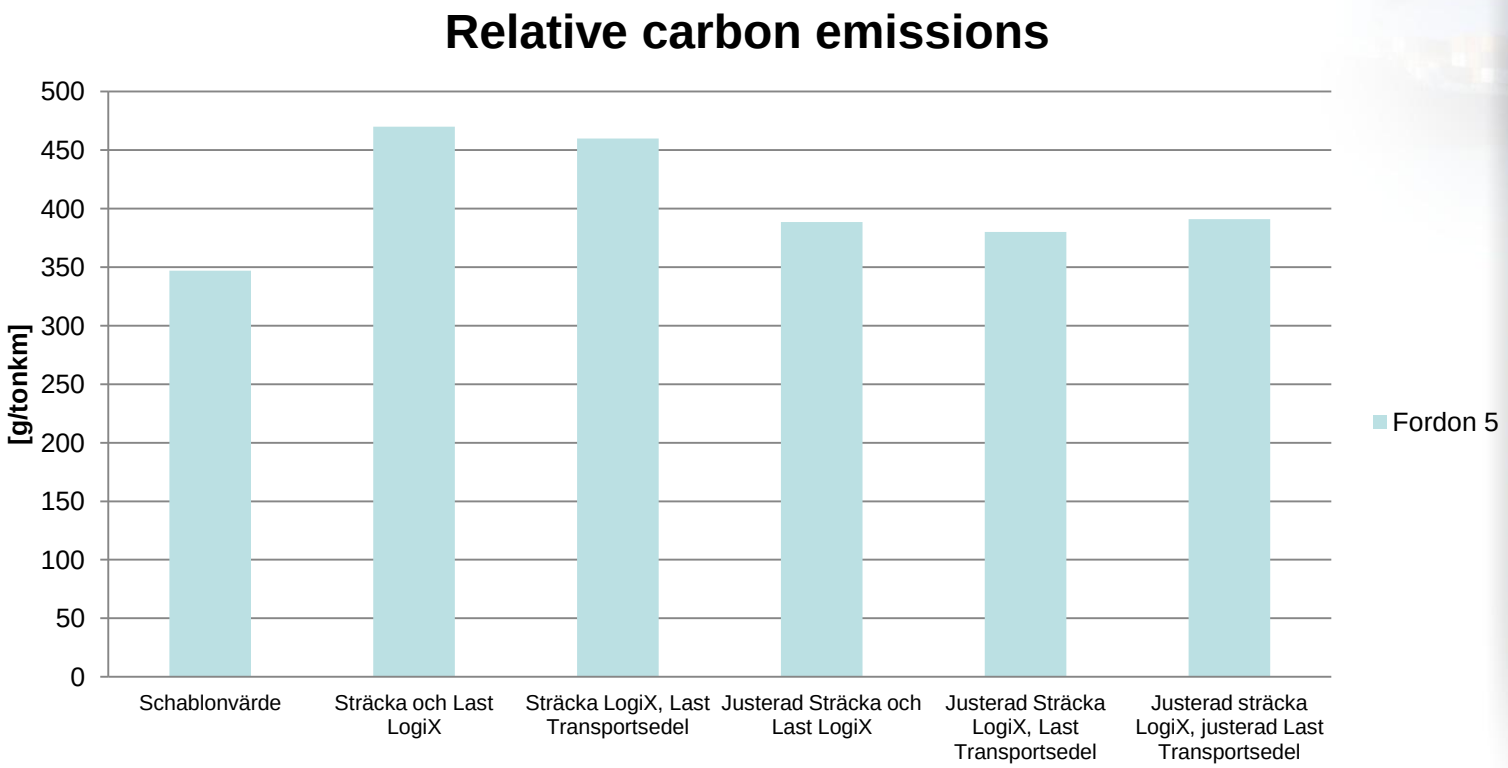
Methodology	Standards	Freight	Travel
	CEN	Goods	Passengers
	ISO 14 025	Road	Road
	PCR/EPD	Rail	Rail
	GHG protocol	Sea	Sea
	Legal	Air	Air
		Fuels	Fuels
		Infrastructure	Infrastructure
		Vehicle/vessel	Vehicle/vessel

More

Performance assessment data

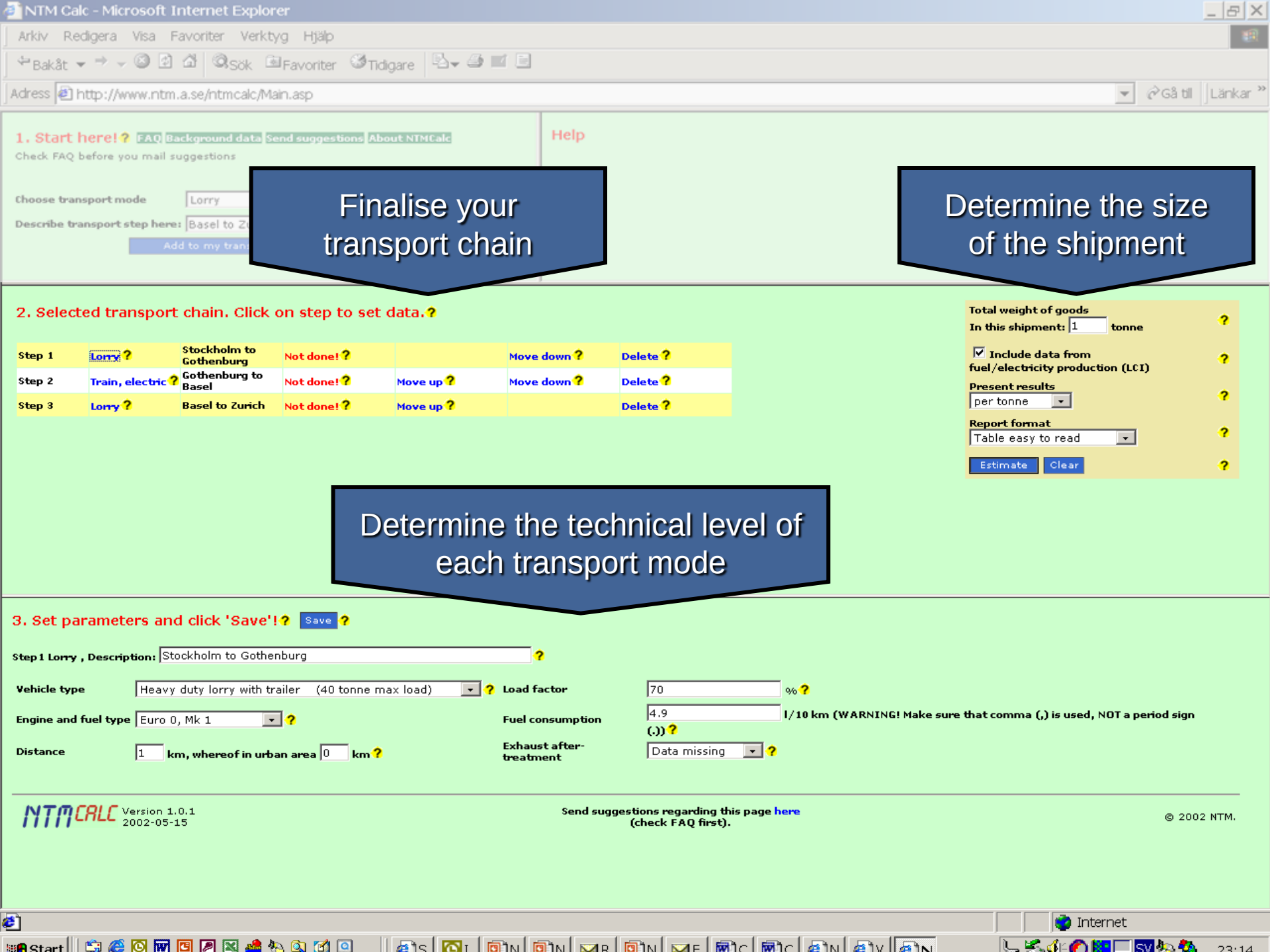
Data	"Model data"	"Real data"
Traffic & transport		
Nodes handling		
Fuel & electricty		

Result – pilot study



NTM performance tools

NTM Tools	Option	Capabilities
NTM*Calc* *Freight/Travel*	Basic	Fixed assumptions
NTM*Calc* *Freight/Travel*	Professional	Flexible assumptions
		Standard API
		Web services/database service


NTM Calc - Microsoft Internet Explorer
Arkiv Redigera Visa Favoriter Verktyg Hjälp
Bakåt Sök Favoriter Tidigare
Adress http://www.ntm.a.se/ntmcalc/Main.asp
Gå till Länkar
1. Start here! FAQ Background data Send suggestions About NTMCalc
Check FAQ before you mail suggestions
Help
Choose transport mode
Lorry
Describe transport step here:
Basel to Z
Add to my tran
Finalise your transport chain
Determine the size of the shipment
2. Selected transport chain. Click on step to set data.
Step 1 Lorry Stockholm to Gothenburg Not done! Move down Delete
Step 2 Train, electric Gothenburg to Basel Not done! Move up Move down Delete
Step 3 Lorry Basel to Zurich Not done! Move up Delete
Total weight of goods
In this shipment: 1 tonne
Include data from fuel/electricity production (LCI)
Present results
per tonne
Report format
Table easy to read
Estimate
Clear
Determine the technical level of each transport mode
3. Set parameters and click 'Save'!
Save
Step 1 Lorry , Description: Stockholm to Gothenburg
Vehicle type
Heavy duty lorry with trailer (40 tonne max load)
Load factor
70
%
Engine and fuel type
Euro 0, Mk 1
Fuel consumption
4.9
l/10 km (WARNING! Make sure that comma (,) is used, NOT a period sign (.))
Distance
1
km, whereof in urban area
0
km
Exhaust after-treatment
Data missing
NTM CALC Version 1.0.1 2002-05-15
Send suggestions regarding this page here (check FAQ first).
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Internet
Start
23:14

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Basic Freight Calculator

Choose means of transport and state the travelled distance, emissions are then calculated per vehicle and route.

Click on the category to get more information.

Shipment weight [ton]: 20

Group	Vehicle	Distance [km]	
Sea	RoRo 2000 Lanemeter	150	Add

Vehicle type	Shipment weight [ton]	Distance [km]	Transport work [tkm]	CO_2 [kg]	NO_x [g]	HC [g]	CO [g]	PM [g]	
Tractor + semitrailer	20.0	100,00	2000,00	126,00	1020,00	40,00	200,00	20,00	Delete
RoRo 2000 Lanemeter	20.0	150,00	3000,00	113,10	4230,00	60,00	390,00	120,00	Delete
SUM		250,00	5000,00	239,10	5250,00	100,00	590,00	140,00	Delete all

Distance help

Road trans

Sea transp

Air transpor

Rail transp

Methods

The environmental performance of transports is determined by several factors. In the Freight Calculator, only a few of those factors are used. The calculation is based on scientifc data for default vehicles and load factors. How much emissions occurr is even influenced by the weather, driving style, vehicle maintenance, type of motor etc. Therefore, results of these calculations have to be seen as an indicator of the magnitude of the environmental impact of freight transports and not as an exact information.

Transport Chain Links

Hamburg to Verona

Up | Down | Edit | Delete | Add

Hamburg to Verona

Parameters

distance	200 km
CargoType	Mass [ton]
Transport mode	Shared
Fuel	Diesel B5 - EU
Road type	Average Road - Swe
EuroClass	Euro4 - EGR
Gradient	±2%
Cargo weight	5 ton
Cargo carrier capacity	14 ton
Cargo load factor	50 %weight
Fuel consumption	0.223 l

Results

	CO2 total	CO2 fossil	CO2 biogen	CO2 equivalent	SO2	CO	HC	CH4	NOx	N2O	PM	Diesel B5 - EU	Energy
Truck with Trailer 14-20t - Hamburg to Verona, distance 200 [km]													
Vessel (tank to wheel)	0.08 ton	0.08 ton	4 kg	0.08 ton	0.5 g	0.08 kg	5 g	0.1 g	0.5 kg	2 g	4 g	0.03 m3	
Fuel (well to tank)	7 kg	7 kg	0.00 g	8 kg	0.02 kg	7 g	0.06 kg	0.04 kg	0.02 kg	1 g	1 g		1E+3 MJ
Sub total	**0.09 ton**	**0.08 ton**	**4 kg**	**0.09 ton**	**0.02 kg**	**0.08 kg**	**0.07 kg**	**0.04 kg**	**0.5 kg**	**3 g**	**5 g**	**0.03 m3**	**1E+3 MJ**

Future business plan

- Cooperate with CLOSER
- Member based funding
- External funding from public research fund
- Long term maintenance and development plan
- New ”services”

Questions?

info@ntmcalc.org

2. Establish relevant system boundaries

- From cradle to grave

Suppliers	Suppliers	Suppliers	Suppliers	Suppliers	
Vehicles & vessels - All traffic modes	**Cargo carrier units** - All traffic modes	**Infrastructure** - All infra modes	**Fuels & electricity** - Production & distribution	**Transport services** - All traffic modes & terminal	**Scrap**
Development R&D product R&D production Supplier evaluation Material evaluation Legal issues	**Development** R&D product R&D production Supplier evaluation Material evaluation Legal issues	**Development** R&D product R&D production Supplier evaluation Material evaluation Legal issues	**Development** R&D product R&D production Supplier evaluation Material evaluation Legal issues	**Development** R&D product R&D production Supplier evaluation Material evaluation Legal issues	**Development - Processes**
Production&operation Legal agreements Procurement Production Delivery Service &maintenance	**Production&operation** Legal agreements Procurement Production Delivery Service & maintenance	**Production&operation** Legal agreements Procurement Produce & operate Deliver accessability Service&maintenance	**Production&operation** Legal agreements Procurement Produce Deliver Service&maintenance	**Operation** Legal agreements Procurement Administrate&produce Deliver Service&maintenance	**Production - Dismantling**
End of life* Production waste	**End of life*** Production waste	**End of life*** Production waste Operation waste Old infrastructure	**End of life*** Production waste Operation waste Production units	**End of life*** Production waste Vehicles & vessels Cargo carrier units	**End of life* - Raw material**

* Includes waste delivered to scrap gate for reuse or recycle