

Cluster 1 – Public Health and Social Equity

| | Indicator(s) | Target(s) | Available Baseline Data | Action Plan(s) | Responsible Agency(s) | |
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| 1 | Public Health | | | | | |
| a | Information build up on public health relatives | a) No. of researches conducted | a) 4 surveys conducted by mid 2010 | a) WHO, DHO, UP PGH, UPNCTS | a) Conduct research smoking, PWD's, respiratory devices, alcohol and drug related accidents, climate change related deceases and other topics vital for EST assessment by 2010. | a) [National] DOH, UP-CPH [Local] LGU, DOTC, LTFRB |
| | | b) No. of benchmarks established | a) 4 benchmarks by mid 2010 | b) DOH | b) Identification of benchmarks | b) DOH |
| b | Formulation and promulgation of Department (DOH) Administrative Orders on public health | a) Action and communications plan developed | a) 1 each by mid 2010 | a) DOH | a) Creation/ formulation of action and communication plan | a) DOH |
| | | b) AO issued | b) 1 by mid 2010 | b) DOH | b) Issue/sign AO | b) DOH |
| | | c) Guidelines and policies developed and circulated | c) 1 set by mid 2010 | c) DOH | c) Prepare and formulate guidelines | c) DOH |
| | | d) IRR issued/ circulated/published | | d) DOH | d) Prepare and formulate IRR | |
| | | e) Road map with time line formulated and mainstreamed | e) 1 road map by mid 2010 | e) DOH | e) Prepare/ formulate and mainstream road map and time line | |
| c | Establishment of linkage/partnership with concerned agencies/groups/stakeholders including information and communication dissemination on public health hazards | a) Inter-agency links established | a) 1 Steering committee, 1 TWG created by 2 nd half of 2010 | a) DOH | a) Creation/ establishment of steering committee and TWG | a) DOH |

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| | | b) Working group/s created | b) At least 1 by 2 nd half of 2010 | b) DOH | b) Create working groups/committee | b) DOH |
| | | c) Issuances of MOA with concerned agencies, including LGU's and NGO's | c) At least 1 MOA by 2 nd half of 2010 | c) DOH | c) Issue/sign MOA | c) DOH |
| | | d) Setting of incentives scheme | d) At least 1 scheme set by 2 nd half of 2010 | d) DOH | d) Establish/set incentives scheme | d) DOH |
| | | e) Media support/ solicited/ tapped for information campaign | e) At least 1 for each type of media by 2 nd half of 2010 | e) DOH | e) enter into MOA with media fit | e) DOH |
| d | Full implementation of EST program on public health | a) Number of community based organizations/ NGO's involved | a) At least 5 NGOs, at least one community-based org. in each highly-urbanized city by 2 nd half of 2010 | a) DOH | a) Establish tie ups with NGO's and community based org | a) DOH |
| | | b) No. of LGU's capacitated and involved | b) At least 10 LGUs in highly urbanized areas by 2011 | b) DOH | b) Capacity assessment and training of identified LGU's. | b) DOH |
| | | c) Medical package for PUV drivers and families integrated in the National Health Program | c) 1 medical package incorporated in the national health program by 2011 | c) DOH | c) Conceptualize and incorporate medical package in the national health program | c) DOH |
| | | d) No. of community based health facilities including health work force, strengthened and capacitated | d) At least 10 community based health facilities by 2011 | d) DOH | d) Strengthen and capacities community based health facilities | d) DOH |
| e | Evaluation and Monitoring of the EST Program | Evaluation and monitoring conducted | At least 1 by 2 nd half of 2011 | DOH | Convene participants to evaluate EST programs and come up with monitoring scheme, and identify additional researches necessary to update data | DOH |

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| 9 | Social Equity and Gender Perspective | | | | | |
| a | Monitoring and reinforcement of existing laws, rules, and regulations on gender, age, and PWD concerns | Level of compliance of concerned agencies and other stakeholders | At least 60% compliance by 1 st half of 2010 | | Convene concerned agencies to evaluate compliance | DOTC, NCDA, NCRFW |
| b | Installation of traffic and transport assistive devices including manpower components | No. of traffic and transport assistive devices installed, and manpower component assigned in key areas | a) At 60% identified, installed and manpower assigned by 2 nd half of 2010 | | a) Determine areas for installation and manpower requirements | a) DOTC, DPWH |
| | | | b) By 2 nd half of 2010 | | b) Installation of needed devices and assignment of personnel in these areas | a) DOTC, DPWH |

Cluster 2 – Roadside Pollution

| | | Indicator(s) | Target(s) | Available Baseline Data | Action Plan(s) | Responsible Agency(s) |
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| 2 | Strengthening roadside air quality monitoring and assessment | | | | | |
| a | Monitor reduction of concentration of TSP and other criteria pollutants | Reduction in concentration of criteria pollutants (%) | 50% reduction by 2015 (TSP=64 mcg/Ncum) | TSP data in HUCs (2008) DENR target to be compliant with NAAQGV for TSP by 2010 (90 mcg/Ncum), use PNRI data for PM10; baseline for other CPs not updated | Establish baseline data for other criteria pollutants; determine contribution of transport to emissions (inventory)-- emission factor development and AAQ modeling; source apportionment/speciation | [National] EMB |
| b | Purchase/Installation of PM10, PM2.5, HC, CO, NO2, SO2 (road side) equipment | No. of operational roadside air quality monitoring stations | a) All 15 major roads in NCR to have monitoring station by 2015 | a) 3 out of 15 majors roads in NCR are TSP-monitored | Identify potential hotspots and prioritize establishment of stations | [Natl] EMB [Local] LGUs of HUCs |
| | | | b) At least 1 monitoring station per HUC in 2015 | b) 16 out of 136 cities do TSP monitoring | | |
| | | | | c) 5 fixed stations (ADMU, Muntinlupa, PUP, NAMRIA, Valenzuela) and 5 others in the MM Airshed (Batangas, Cavite, Los Banos, Clark) under restoration | | |
| | | | | d) Mobile van station operational (PhP12 million per station investment plus PhP3 million O&M per year) | | |
| | | | | e) 3 other existing telemetry (open-path) stations operational in Cebu, CDO, Baguio | | |

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| d | Capacitate local government units and other sectors on monitoring and assessment | a) No. of trained LGU personnel in basic air quality management | a) All 33 HUCs to have at least 2 trained personnel by 2012 | a) MM-8 ASBUs existing (QC-dormant, Pasig, Muntinlupa, Makati, Mandaluyong, Marikina-for creation, Manila, Malabon, Pasay)-verify with MMASBA | a) Identify potential staff to be trained in the HUCs; | [Nat!] EMB, DOTC/LTO [Local] LGU |
| | | b) No. of LGU AQM plans developed and implemented | b) All 33 HUCs to have AQM plans developed by 2012 and implemented by 2015 | b) Cebu, Baguio, Davao-for creation LGUS with AQM Plans: Cebu, Mandaue, Talisay, Lapu-Lapu, Makati; verify other LGUs in Metro Manila | b) Conduct trainings (e.g. use DENR mobile AQ monitoring van); conduct of action planning workshops on AQM | |

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| 3 | Traffic Noise Management | | | | | |
| a | Amendment/updating of noise standards and compliance | Revised noise standard | Revise standards by 2010 | NPCC MC 002 Rules & Regulation (1980); (last roadside noise level survey was by DOTC JICA MMUTIS in 1997) | Update of baseline roadside noise level data by 2010; set up IATWG | [Nat!] EMB, HLURB, DOTC, DTI-BPS |
| b | Strict enforcement of MV noise regulations | Roadside noise level | Compliance with new standards by 2012 | MMUTIS data | Purchase of noise level meters; training on use of equipment and procedure of LTO and LGU personnel; issuance of MC/AO on noise regulations for inspection of in-use MVs; roadside apprehension procedures for LGUs | [Nat!] DOTC/LTO [Local] LGU ASBU |
| c | Enhancement of LGU capability/enact local ordinances on noise [incl ambient and source] | Enacted ordinances on noise | 33 HUCs by 2013 | LGU ordinances (ex. QC) | Dissemination of template of ordinance (samples, ex. QC) | [Nat!] EMB, HLURB, DOTC [Local] LGU |

| | Indicator(s) | Target(s) | Available Baseline Data | Action Plan(s) | Responsible Agency(s) | |
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| 4 | Vehicle emission control, standards, and inspection and maintenance | | | | | |
| b | Establish motor vehicle standards on fuel economy and roadworthiness (in-use) | a) % compliance of MVs to emission standards | a) 100% compliance by 2015 | a) 40% for PUBs in Mmla in 2003 | Develop fuel efficiency standards for PT vehicles/fuel efficiency ratings for private modes (for PT, to aid in LTFRB fare setting); develop vehicle scrap page program | [Natl] DOTC, LTO, LTFRB, DTI-BPS, EMB, DOE-EUMB/OIMB { CHVSR} |
| | | b) developed fuel efficiency standards for public transport | b) developed fuel efficiency ratings/standards by 2011 for all vehicles | b) MM PUJ- 5.6 kpl from Mitsubishi Study (2007) | | |
| | | c) developed vehicle roadworthiness standards for all vehicles | c) developed roadworthiness standards for all vehicles (in-use) by 2011 | c) draft standards/guidelines of DOTC-LTO; EO 774, AO 254 targets-need to implement 50% fossil fuel consumption reduction by 2011 (refers to conventional fuels such as gasoline and diesel);Draft AO on MVIS Procedural Guidelines for finalization by 2009 | | |
| e | Strengthen road side apprehension on {smoke-belchers and} polluting and non-roadworthy vehicles + Intensify organization of Anti Smoke Belching Units under CENRO office | a) % compliance of MVs | a) 75% compliance of MVs by 2015 | a) 25% compliance of diesel vehicles | Encourage enactment of local ordinances to impose fees and set aside collection as a local clean air fund; encourage creation of LGU ASBUs with training; facilitate deputation of LGU personnel by LTO | [Natl] EMB, LTO [Local] LGU-ASBU (deputized) |
| | | b) No. of operational LGU ASBUs; | b) LGU ASBUs established in 33 HUCs by 2011 | (b) 5 out of 16 LGUs in Metro Manila as of 2006; template ordinance for ASB | | |

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| | | | | already available | | |
| f | Mandatory vehicle inspection of PUV [2x a year] | % compliance | 100% compliance by full MVIS implementation (Phase 1 to 3) | MVIS Phase I almost completed (2 MVIC Stations in NCR, 1 SF, Pamp and 1 in Cebu; Davao and Alaminos, Laguna to follow) - infra only | Issuance of policy directive requiring of mandatory twice a year inspection of PUVs; | [Natl] DOTC/LTO |

| | | Indicator(s) | Target(s) | Available Baseline Data | Action Plan(s) | Responsible Agency(s) |
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| 5 | Cleaner fuels | | | | | |
| a | Increase use of cleaner fuels for all vehicles | a) % of vehicles using alternative fuels | a) 100% of PT vehicles and 100% for private vehicles by 2011 | a) 14,500 Auto-LPG vehicles as of June 2009; | Provision of fiscal and non-fiscal incentives for producers and users of cleaner fuels; incentives for assemblers of cleaner fuel vehicles; incentives for clean fuel conversion/retrofit companies); negotiate for sources of natural gas supply (e.g. Malampaya or imported); develop standards for LPG conversion of tricycles | [Natl] DOE, BOI, DOF |
| | | b) No. of distribution stations for alternative fuels | b) at least 2 stations per PT corridor by 2015 | b) 112 retail dispensing Auto-LPG stations & 64 garage Auto-LPG stations; Biofuels Act mandates biofuel blends by 2011 for all motor vehicles | | |
| | | | c) 200 CNG buses by 2015 | c) 26 CNG buses under NGVPPT currently in operation; BOI provides incentives for registered assemblers of vehicles (Hybrid and EVs-0% for parts and components; others-1% pref. tariff) | | |
| b | Adoption of harmonized fuel quality standards (Euro | Euro 4 adoption | Introduction of Euro 4 fuels by 2012 | Euro 2 implemented from 2008 | Harmonization of biofuel blends with Euro 4 standards; study on | [Natl] DOE, DOTC |

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| | regulations) | | (except for motorcycles)- adoption of Euro 2 by 2011 | | appropriate fuels for motorcycles/ tricycles (e.g. conversion of 2- stroke to LPG); suitability of E10 to carbureted vehicles; | |
| c | Improve distribution system of CNG | Number of daughter stations | 2 in Batangas- Laguna-Manila corridor by 2012 (pilot) | 1 CNG mother station (Batangas) and 1 CNG daughter station (Binan) | Conduct of FS for additional CNG refueling stations; encourage investors for LNG terminals and pipeline distribution system | [Nat!] DOE, DOTC |

Cluster 3 – Transport Planning

| | | Indicator(s) | Target(s) | Available Baseline Data | Action Plan(s) | Responsible Agency(s) |
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| 6 | Public transport planning and travel demand management | | | | | |
| b | PT network integration (including efficient PT) | a) Inclusion in national plan | a1) Inclusion in MTPDP by 2010 a2) by 2010 | | a1) Integrate EST in NTPP2, a2) DOTC to endorse NTPP2 to NEDA | a1) DOTC a2) DOTC/NEDA |
| | | b) # of LGUs having PT planning integrated in local plans | b) 4 metro areas (Mmla, Cebu, Davao, Baguio) by 2010 | | b) Dev't of HLURB policy guidelines to integrate PT plan to LGU plan - mandatory to HUCs | b)HLURB/DILG/DOTC |
| | | c) # of LGUs with intermodal stations | c) 33 HUCs with intermodal station(s) by 2011 | c) to be verified by DILG-BLGD, | c) Develop policy guidelines | c) DOTC, DILG |
| | | d) Presence of integrated ticketing system for Mmla's rail system | d) Integrated ticketing by 2011 | d) Proposal submitted to NEDA | | |
| c | Develop and enhance appropriate freight transport policies | # of development studies e.g., logistics improvement plan | a) Nationwide study on freight flow/logistics by 2010 | a) DOTC SIRPAFF (2005) and DPWH Truck Overloading Study 1&2 | Push studies for rationalized truck routes | [Nat!] DOTC, DPWH [local] MMDA, LGU |
| | | | b) Metro or City-specific studies on logistics by 2013 | b) DOTC-RRTS (2007), MMDA and LGU truck ban ordinances | | |
| d | Develop and implement appropriate TSM/TDM measures (e.g., synchronization of traffic lights, road widening and paving, alternate routes) | a) travel time reduction for public and private transport users | a) 25% reduction in peak hour travel time in HUCs by 2013 | a) SSTRIMM | a) Conduct studies to assess travel speeds along critical corridors/sections | a) LGUs |

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| | | b) # of rationalized truck routes | b) Rationalized truck routes for Metro Manila by 2013 | | b) Assessment of truck routes in MM | b) MM LGUs & MMDA with DOTC |
| e | Develop mass transit systems (instead of Construct BRT Lines) | a) # of cities with appropriate mass transport | a) 33 HUCs with identified mass transport system by 2010 | a) MMUTIS, MCLUTS, DCLUTS, MMPTS | a) Assessment of existing public transport system | a) DOTC, LTFRB, DILG |
| | | b) # of mass transport lines | b) One mass transport line in Cebu and Davao by 2013 | b) Metro Manila BRT Pre-FS | b) Push studies for mass transport including BRT and rail | b) DOTC, LTFRB |

| | | Indicator(s) | Target(s) | Available Baseline Data | Action Plan(s) | Responsible Agency(s) |
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| 7 | Non-motorized transport | | | | | |
| a | Develop policies and guidelines for pedestrian- and cycling-inclusive land use planning | a) # of NMT-friendly cities | a) 33 HUCs evaluated using NMT compatibility indices by 2010 | Marikina Bikeways & UP Bikeways | a) Develop local indices | DOTC, DILG and LGUs |
| | | b) # /length of bike lanes constructed | b) 33 HUCs to have NMT plans by 2012 | | b) Push for plans by 2012 | |
| | | c) # /length of pedestrian walkways constructed | c) 2012 | | c) Push for plans by 2012 | |
| | | d) % or amount of budget provision or incentives on the use of NMTs (national and local government) | d) 2012 | | d) Push for plans by 2012 | |
| b | Provision of NMT facilities | a) # of NMT-friendly cities | a) 33 HUCs evaluated using NMT compatibility indices by 2010 | Marikina Bikeways & UP Bikeways | a) Develop local indices | DOTC, DILG and LGUs |
| | | b) # /length of bike lanes constructed | b) 33 HUCs to have NMT plans by 2012 | | b) Push for plans by 2012 | |

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| | | c) # /length of pedestrian walkways constructed | c) 2012 | | c) Push for plans by 2012 | |
| | | d) % or amount of budget provision or incentives on the use of NMTs (national and local government) | d) 2012 | | d) Push for plans by 2012 | |
| d | Provision of pedestrian and bike lanes (same as Provision of NMT facilities) | a) # of NMT-friendly cities | a) 33 HUCs to have bikeway plans by 2012 | Marikina Bikeways & UP Bikeways | | [natl] DPWH [local] LGU |
| | | b) # /length of bike lanes constructed | | | | |
| | | c) # /length of pedestrian walkways constructed | | | | |
| | | d) % or amount of budget provision or incentives on the use of NMTs (national and local government) | | | | |

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| 8 | Environment and people friendly infrastructure development | | | | | |
| a | Incorporate green architecture principles in the design of transportation infrastructure | a) # of cities adopting or implementing environmentally sustainable transport infrastructure including green designs | a) 33 HUCs by 2012 | Quezon City Green Architecture Ordinance | a) Develop local indices by 2010 | DOTC, DILG with LGUs |

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| | | b) Increase in #/Length of pedestrian walkways and other people friendly facilities | b) prepared pedestrian facilities plan for 33 HUCs by 2012 | | b) Prepare plans by 2011, implementation by 2013 | |
| b | Incorporate "inclusive transport" principles in transportation infrastructure and vehicle design | a) % Reduction in accidents involving elderly, children, women and persons with disabilities | a) 50% reduction in accident rates by 2012 | none except RA 344, to be verified with LTFRB | Strict implementation of provisions for PWD, senior citizens, pregnant women, etc. | [natl] DOTC, LTFRB, LTO, etc., DTI, DPWH [local] LGU |
| | | b) % Increase in the number of public transport vehicles incorporating "inclusive" design | b) 100% of buses with priority seats by 2010 | | | |
| | | c) # of cities adopting or implementing environmentally sustainable transport infrastructure including green designs | c) 33 HUCs by 2012 | | | |
| | | d) Increase in #/Length of pedestrian walkways and other people friendly facilities | d) prepared pedestrian facilities plan for 33 HUCs by 2012 | | | |
| c | Provide seamless and secure transport systems (e.g., seamless transfers) | # of intermodal terminals; # of incidents | Development of indices or parameters a) 2009 | None | a) Develop indices | [natl] DOTC, OTS, LTFRB, LTO, etc., DTI, DPWH [local] LGU |
| | | | b) 2010 | | b) Conduct diagnostic assessment | |
| | | | c) 2010 | | c) Prepare intermodel terminal plans | |

Cluster 4 – Road Safety

| | | Indicator(s) | Target(s) | Available Baseline Data | Action Plan(s) | Responsible Agency(s) |
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| 10 | Road safety and maintenance | | | | | |
| a | Road safety audit | a) Number of road project audited for road safety | a) 100% of national highways and expressways safety-audited by 2013 (3 yrs counting from 2011 when MTPDP is proposed) | a) DPWH (BME reports, semi-annual TARAS reports) | a) RSA training | [natl] DPWH, MMDA, PEO, CEO, NCTS |
| | | b) percent of road-kms audited | b) audited every 5 years | b) MMDA (MMARAS) semi-annual report | b) development or RSA training module | |
| | | c) number of RS auditors | c) significant number of RS auditors | | | |
| c | Valuation of accident costs | Itemized accident cost components | Updated costing by 2010 | 2003 Study by ADB | update costs (research) | [natl] DOH, NEDA, UP-NCTS, DPWH |
| e | Establish road traffic safety zones or TSZs (e.g. UP, Ayala-Alabang Village, Subic TDZ, The Fort TDZ, EAST Ave TDZ, etc.) | Number of road traffic safety zones | a) All 15 major corridors in Metro Manila and all existing expressways and accident-prone areas by 2012 | a) LTO (TDZ's) | a) identification of criteria for selecting candidate areas/corridors TSZ | [natl] DOTC, DPWH, DILG, MMDA |
| | | | | b) UP Traffic Management study | b) traffic management studies | |
| | | | | c) LGU ordinances | c) legal support like issuance of LGU ordinances, or aids of legislation | |

| | | Indicator(s) | Target(s) | Available Baseline Data | Action Plan(s) | Responsible Agency(s) |
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| 12 | Knowledge base, awareness and public participation | | | | | |
| i | Road accident database system | a) number of computerized database systems | a) establish a system that integrates existing and proposed databases (2011) | a) TARAS since 2005 | a) develop RADSys, | [natl] DOTC, DILG-PNP, DOH, DPWH, MMDA, NCTS, TRB |
| | | | | b) MMARAS since 2005 | b) establish about 30 computerized accident database system for tertiary hospitals | |
| | | | | c) DOH trauma registry | c) enhance TARAS to include accident data on local roads | |
| | | | | d) expressway accident databases | | |
| j | Establish road safety research center | a) established research center | a) research center or unit established by 2011 | N/A | a) proposal for a road safety research center | [natl] DOTC, UP, DPWH, MMDA, DOH |
| | | b) number of researches conducted / disseminated | b) at least one compendium per year | | b) conduct road safety research | |
| | | | c) annual road safety research conference | | c) dissemination activities like annual conferences, annual reports, and publications | |
| k | Capability building on road safety at the LGU level | a) Number of training programs conducted | a) at least one road safety training officer per LGU | a) DPWH RSA training | a) development of RS training modules | [natl] DOTC, DPWH, MMDA, PNP, NCTS |
| | | b) number of LGU personnel trained | b) at least one RS training program conducted per Region (2010) | b) AAP-NCTS seminars and conferences | b) Trainors' training in MM | |

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| | | | | c) TTC/NCTS training program | c) regional RS training program/seminar | |
| | | | | d) SOPI annual RS conventions | | |

Note: Other items under Thematic Area 12 [Knowledge Base, Awareness and Public Participation] were not discussed in the workshop and will be accomplished and refined by the study team.