

TSUNAMI RECOVERY WASTE MANAGEMENT PROGRAMME

MONTHLY UPDATE – August 2006

1. AUGUST HIGHLIGHTS

In Aceh Jaya the Tsunami Recovery Waste Management Programme (TRWMP) is on progress of finalizing the first garbage cell in Gunung Tanggoh temporary dumpsite. This temporary dumpsite will be covering tsunami waste and municipal waste collected around the town. The temporary dumpsite is estimated to be fully operated by the end of September 2006.

The project in Aceh Barat continued to make good progress in the rehabilitation of sludge pond and workshop construction in Lapang final dumpsite. During August, 90% of the workshop building has been finished while the construction of sludge pond is on completion of the first phase (pond 1) out of 3 ponds existed. This workshop will be used as a carpentry workshop to process the recycle wood collected to more proper forms and sizes for furniture manufacturing. DKPLH has begun on the construction of composting box with the capacity of approximately 6 m³ consists of 4 cells.



*Finalization of temporary dumpsite,
Gunung Tanggoh, Aceh Jaya*

Further tsunami waste clearance commenced in Aceh Besar. 3,775m³ of tsunami waste was cleared from temporary dumpsite in Lampaya village, Lhoknga and 10 ha of *sawah* clearance in Layeun village, Leupung.



*Initial construction on the composting box,
Lapang final dumpsite, Aceh Barat*

August in figures:

Tsunami waste cleared	279,637m ³
Wood segregated for reuse	420m ³
Roads made with crushed rubble	10.2km
Municipal waste collected	4,698m ³
Temporary workers with TRWMP	921

2. LOCATION OF TRWMP ACTIVITIES

District	Implementing Partner	Letter of Agreement
Kota Banda Aceh	Dinas Kebersihan dan Pertamanan (DKP)	March 2005
Aceh Barat / Nagan Raya	Dinas Kebersihan, Penertiban dan Lingkungan Hidup (DKPLH)	May 2005
Pidie	Dinas Pendapatan, Kebersihan dan Pertamanan (Dispenda)	January 2006
Aceh Jaya	Dinas Pendapatan, Kebersihan dan Pertamanan (Dispenda)	March 2006
Aceh Besar	Kantor Kebersihan Pertamanan dan Pemadam Kebakaran (KKP)	June 2006
Nias Selatan	Dinas Permukiman dan Prasarana Wilayah (KIMPRASWIL)	July 2006
Nias	Dinas Permukiman dan Prasarana Wilayah (KIMPRASWIL)	August 2006

3. KEY OUTPUTS AND ACHIEVEMENTS TO END August 2006

3.1 KOTA BANDA ACEH

3.1.1 Key Achievements in August 2006

- Collection of 1,495m³ of municipal solid waste and drainage clean up of 0.3km/day from around Banda Aceh supported by temporary workers.
- 114,000m³ of tsunami waste has been removed from *sawah* in Blang Krueng, Rukoh and Lamtemen Timur.
- Demolition of 2 tsunami and/or earthquake-damaged buildings such as a government office and mosque (At Taqwa Mosque).
- Completion of 535 units of furniture (such as school tables, chairs, wood fence etc) at Gampung Jawa recycled wood project (*picture right*).



Furniture workshop, Gampung Jawa, Banda Aceh

- Support provided to other agencies and NGOs in land clearing and rehabilitation of community facilities (through loan of heavy equipment), as follows:

No.	Organization's Name	Working Area	Activity
1	GTZ	Kling Cot Arun	Land filling for shelter project
2	Life guard Group	Lhoknga Beach	Lhoknga beach-Clearing

- Recruitment of a Programme Associate for Waste Management (Kota Banda Aceh-Pidie) to cover TRWMP activities in Kota Banda Aceh, Pidie and Aceh Besar.
- Recruitment of a Programme Coordinator for Waste Management (Kota Banda Aceh) to cover TRWMP activities in Aceh and Nias Province.

3.1.2 Selected Project Visits to TRWMP Projects in August 2006

- 2nd August: Supervision visit from MDF
- 29th August : Supervision visit from UE

3.1.3 Status against Key Performance Indicators

Key Performance Indicator	August 2006	Total TRWMP in Kota Banda Aceh*
Tsunami waste cleared (m ³)	114,000	448,084
Municipal waste collected / disposed (m ³)	1,495	54,043
Sawah / tambak /land rehabilitated (ha)	38	96.6
Tsunami / earthquake buildings demolished (no.)	2	133
Drains cleared (average km per day)	0.3	0.5
Roads swept (average km per day)	-	-
Temporary workers (average no. per day)	236	887
Male workers (%)	88%	56%
Female workers (%)	11%	44%
Internally Displaced Persons (IDPs) amongst workers (%)	50%	66%
Ex-Free Aceh Movement (GAM) amongst workers (%)	-	1%
Beneficiaries employed in waste livelihood projects (average no. per day)	63	32
Heavy equipment leased (average no. per day)	54	79
Dumpsites upgraded / rehabilitated (no.)	-	1
Waste cells (ha)	-	7
Daily cover for waste area (ha)	-	11
Recovered materials beneficially recycled		
Roads rehabilitated / reclaimed with rubble (km)	-	19.2
Timber stockpiled for future re-use (m ³)	-	12,954
Recovered wood processed into condition suitable for recycling (m ³)	332	822
Timber provided to NGOs for reconstruction efforts (m ³)	1	44
Furniture units (e.g. table, cupboard, etc) completed (no.)	535	1,549

* Includes data from before Multi Donor Fund involvement (pre-September 2005)

3.1.4 Key Activities to Date

- Capacity building with Dinas Kebersihan dan Pertamanan (DKP).
- Clearance / recovery of tsunami generated wastes from private / government land.
- Resumption of municipal solid waste (MSW) collection.
- Temporary employment of Internally Displaced Persons (IDPs).
- Building demolition project.
- Rehabilitation / reclamation of roads using tsunami rubble.
- Provision of recovered wood for NGO reconstruction projects.

- Carpentry workshop for re-use of tsunami timber and furniture manufacture demonstration project.
- Upgrade of Kota Banda Aceh municipal dump at Gampung Jawa to interim engineered landfill.
- Site search (with GTZ) for permanent sanitary landfill for Kota Banda Aceh and Aceh Besar.
- Re-focusing the work of TRWMP temporary workers to a core of 300 workers based in Gampung Jawa dumpsite working on MSW collection, demolition, and livelihood projects.

3.1.5 Key Activities proposed for September 2006

In addition to the continuation of on-going activities from August, the following activities are planned for September 2006:

- Continuing TRWMP work through the LoA amendment of Kota Banda Aceh with the Mayor until the end of December 2006.
- Continuing *sawah* clearance in Rukoh and Lamtemen Timur.

3.2 ACEH BARAT / NAGAN RAYA

3.2.1 Key Achievements in August 2006

- During this period, the construction of a carpentry workshop has been finished for approximately 90% from the total 300m². DKPLH has been started to construct a composting box and the rehabilitation of the existing sludge pond in Lapang FDS.
- Pasié Pinang and Gampong Darat temporary dumpsite was fully cleared of tsunami waste during the month of August and approximately 1,193m³ of tsunami waste has been recovered and transported to Lapang final dumpsite.
- During this period, DKPLH has successfully demolished 7 earthquake/tsunami damaged buildings, consists of 2 government properties, 4 community houses and 1 small industries' building. As the result, DKPLH has recovered 1,931 m³ of concrete debris and bricks, 3,555kg of scrap metals and 1,132 m³ of other waste.
- Commenced of upgrading Lapang final dumpsite with the construction of additional waste cell with the capacity of approximately 7,200 m³ (phase-1).
- Support provided to other UN Agencies and NGOs in land clearing and rehabilitation of community facilities (loan of one backhoe, one bulldozer and 2 PS-190 DT), as follows:

List of heavy equipment used by NGOs in Aceh Barat and Nagan Raya Districts

No.	Organization's Name	Working Area	Activity
1	Head of Panggong Village and CRS	Panggong Village, Johan Pahlawan.	Rehabilitation of 700 m drainage system within CRS housing project area in Panggong village.

2	Head of MIN Putim school and Community Putim village	Putim Village, Kaway XVI.	Rehabilitation of 600 m2 land for school construction and land leveling.
3	Camat Kaway XVI	Blang Beurandang Village, Kaway XVI	Land clearance for approximately 2 ha of ex-shelter area in Kaway XVI sub-district.
4	Community and Head of Putim Village	Putim Village, Kaway XVI.	Rehabilitation of 800 m2 land for public construction in Putim Village.
5	Solidaritas	Kreung Buloh Rayeuk village, Nagan Raya	Rehabilitation of 450 m2 land for school construction in Kreung Baloh Rayeuk.
6	Yakonda	Kaway XVI	Clearance of 2 km roads for tourism area in Kaway XVI.

3.2.2 Status against Key Performance Indicators

Key performance indicators for TRWMP in Aceh Barat

Key Performance Indicator	August 2006	Total TRWMP in Aceh Barat & Nagan Raya*
Tsunami waste cleared (m ³)	7,575	115,718
Municipal waste collected / disposed (m ³)	2,365	21,115
Sawah / tambak /land rehabilitated (ha)	2.1	30.8
Tsunami / earthquake buildings demolished (no.)	7	89
Drains cleared (average km per day)	2.2	1.7
Roads swept (average km per day)	14.4	15.5
Temporary workers (average no. per day)	432	488
Male workers (%)	54%	53%
Female workers (%)	46%	47%
Internally Displaced Persons (IDPs) amongst workers (%)	90%	91%
Ex-Free Aceh Movement (GAM) amongst workers (% per month)	4%	5%
Beneficiaries employed in waste livelihood projects (average no. per day)	40	80
Heavy equipment leased (average no. per day)	34	49
Dumpsites upgraded / rehabilitated (no.)	-	2
Waste cells (ha)	-	0.5
Daily cover for waste area (ha)	3.0	21
Recovered materials beneficially recycled		
Roads rehabilitated / reclaimed with rubble (km)	2.7	17.7
Timber stockpiled for future re-use (m ³)	420	3,989
Recovered wood processed into condition suitable for recycling (m ³)	15	15
Timber provided to NGOs for reconstruction efforts (m ³)	-	65
Furniture units (e.g. table, cupboard, etc) completed (no.)	-	-

Includes data from before-Multi Donor Fund involvement (pre-September 2005)

3.2.3 Key Activities to Date

- Extension of TRWMP LoA with DKPLH until December 2006.
- Comparative study of waste management sites in Banda Aceh conducted by Dinas Kebersihan, Penertiban dan Lingkungan Hidup (DKPLH).
- Preliminary construction for wood carpentry workshop for reuse of timber recovered from tsunami waste.
- Clearance/recovery of tsunami generated wastes from private/government land.
- Resumption of municipal solid waste (MSW) collection.
- Temporary employment of Internal Displace Persons (IDPs).
- Demolition of earthquake/tsunami damaged buildings.
- Initial work of upgrading the Lapang municipal dumpsite.
- Rehabilitation of drainage in town through employment of temporary workers.
- Clean up of streets in town through employment of temporary workers.

3.2.4 Key Activities proposed for September 2006

The following activities are planned for September 2006:

- Continuing development of waste management project such as recycling and composting, in Aceh Barat and Nagan Raya (for the Sustainable Livelihoods Programme).
 - Finalizing construction of the wood carpentry workshop and procurement of required machinery.
 - Continuing the rehabilitation process of Lapang FDS by rehabilitating the existing sludge pond and placing clay lining in the new waste cell.
 - Continuing tsunami generated waste clearance in Aceh Barat and Nagan Raya.
 - Conducting a technical assessment on the further rehabilitation of Lapang dumpsite and options for a long-term sanitary landfill for Aceh Barat and Nagan Raya.
-

3.3 PIDIE

3.3.1 Key Activities in August 2006

- Tsunami waste clearance/sorting of 2,912m³ from Benteng beach site and transported to Km23 dumpsite.
- Continue of upgrading temporary dumpsite at Cot Padang Lila ("Km23"), by providing the third waste cell with the approximated capacity up to 45,000m³.

- Continue the construction of third cell in Mutiara dumpsite used for regular municipal solid waste collection (capacity 8,200m³) to cover surrounding area.
- Restart garbage separation in Benteng beach by using metal screening and recruited additional temporary workers to conduct manual waste sorting.
- MSW collection (provision of dump trucks and temporary workers), drainage cleaning and street sweeping in Kota Sigli and Kabupaten Pidie.
- Support local communities in the rehabilitation of community roads, through lending of heavy equipment, as follows:

No.	Organization's Name	Working Area	Activity
1	Kecamatan Kota Bakti	Desa Lhok Keureuncong, Lamlo	Provision of heavy equipment (excavator and bulldozer) to rehabilitate about 2 km of community road
2	Kecamatan Tiro	Tiro	Provision of heavy equipment (excavator and bulldozer) to rehabilitate about 4 km of community road

3.3.2 Status against Key Performance Indicators

Key Performance Indicator	August 2006	Total TRWMP in Pidie
Tsunami waste cleared (m ³)	2,912	14,346
Municipal waste collected / disposed (m ³)	838	4,379
Sawah / tambak /land rehabilitated (ha)	-	-
Tsunami / earthquake buildings demolished (no.)	-	-
Drains cleared (average km per day)	1.3	0.7
Roads swept (average km per day)	3.4	2.7
Temporary workers (average no. per day)	177	138
Male workers (%)	70%	70%
Female workers (%)	30%	30%
Internally Displaced Persons (IDPs) amongst workers (%)	55%	69%
Ex-Free Aceh Movement (GAM) amongst workers (%)	-	0.0%
Beneficiaries employed in waste livelihood projects (average no. per day)	-	-
Heavy equipment leased (average no. per day)	24	24
Dumpsites upgraded / rehabilitated (no.)	-	2
Waste cells (ha)	-	1.4
Daily cover for waste area (ha)	-	-
Recovered materials beneficially recycled		
Roads rehabilitated / reclaimed with rubble (km)	-	0.4
Timber stockpiled for future re-use (m ³)	-	9
Recovered wood processed into condition suitable for recycling (m ³)	-	-
Timber provided to NGOs for reconstruction efforts (m ³)	-	-
Furniture units (e.g. table, cupboard, etc) completed (no.)	-	-

3.3.3 Key Activities to Date

- Capacity building with Dinas Pendapatan, Kebersihan dan Pertamanan (DISPENDA).
- Upgrading of dumpsite at Km23 and rehabilitation works at Mutiara dumpsite.
- Resumption of MSW collection (provision of dumptrucks and temporary workers), drainage cleaning, and street sweeping in Kota Sigli.
- Waste segregation by temporary workers at the existing dumpsite in Benteng (Sigli beach).

3.3.4 Key Activities Proposed for September 2006

In addition to the continuation of the key activities from during August, the following new activities are planned for September 2006:

- Finalization of retaining berm wall from third cell at Km23 dumpsite.
- Finalization segregation between tsunami waste and soil at Benteng beach site before transported to Km23 dumpsite by using metal screening.
- Finalization on tendering process for construction of drainage cover in Kota Sigli.

3.4 ACEH JAYA

3.4.1 Key Achievements in August 2006

- Continue tsunami waste recovery activities in paddy fields, located in 5 villages within Krueng Sabee sub district (Padang Datar, Mon Mata, Keude Krueng Sabee, Kabong and Datar Luas). Approximately 151,375m³ of tsunami waste was recovered from 173ha of paddy fields cleared. Around 1,100 local farmers will be able to resume their agriculture business in the near future.
- Continue construction of a temporary dumpsite located in Gunung Tanggoh, Desa Keutapang. The dumpsite will be used for municipal waste collection from Calang and its surrounding areas and expected to be completed in the early September 2006.
- Support communities in Keutapang village for land clearing (shelter project), approximately 5 ha has been cleared and ready to be used.
- Sawah clearance (tsunami waste removal from fields) in Babah ie village, Lamno sub-district. Approximately 10 ha of *sawah* have been cleared while the waste generated is used for community land leveling.
- Following an environmental and technical review of 2 options land for an interim waste disposal site has been selected and agreed by surrounding communities, Kecamatan Lamno (Lamno sub-district) and DISPENDA Aceh Jaya located 5km from Lamno town. The letter of landfill tenure transfer from the community to DISPENDA has been copied to UNDP.
- Support provided to other agencies and NGOs (through loan of heavy equipment), as follows :

No.	Organization's Name	Working Area	Activity
1	Aceh Switchover Committee	Sampoiniet sub district	Provision of lowboy container to mobilize ASC's excavator from Lamno to Sampoiniet sub district.

3.4.2 Status against Key Performance Indicators

Key Performance Indicator	August 2006	Total TRWMP in Aceh Jaya
Tsunami waste cleared (m ³) (<i>estimate</i>)	151,375	256,375
Municipal waste collected / disposed (m ³)	-	-
Sawah / tambak /land rehabilitated (ha)	173	263
Tsunami / earthquake buildings demolished (no.)	-	-
Drains cleared (average km per day)	0.49	0.4
Roads swept (average km per day)	-	-
Temporary workers (average no. per day)	15	15
Male workers (%)	100%	100%
Female workers (%)	0%	0
Internally Displaced Persons (IDPs) amongst workers (%)	-	-
Ex-Free Aceh Movement (GAM) amongst workers (% per month)	-	-
Beneficiaries employed in waste livelihood projects (average no. per day)	-	-
Heavy equipment leased (average no. per day)	36	33
Dumpsites upgraded / rehabilitated (no.)	1	2
Waste cells (ha)	0.3	3.3
Daily cover for waste area (ha)	-	-
Recovered materials beneficially recycled		
Roads rehabilitated / reclaimed with rubble, new road (km)	7.5	8.7
Timber stockpiled for future re-use (m ³)	-	-
Timber provided to NGOs for reconstruction efforts (m ³)	-	-
Recovered wood processed into condition suitable for recycling (m ³)	-	-
Furniture units (e.g. table, cupboard, etc) completed (no.)	-	-

3.4.3 Key Activities to Date

- Capacity building with Dinas Pendapatan Daerah (DISPENDA).
- Sawah clearance (tsunami waste removal from fields and drainage) in Krueng Sabee District.
- Tsunami waste removal from community areas and drainage within Krueng Sabee sub-district.
- Continue the construction of Gunung Tanggoh dumpsite in Keutapang village.
- Assessment of potential dumpsite in Lamno sub district and coordination with local government authorities in the area.
- Access road construction to second temporary dumpsite in Gunung Rambot, Keutapang village.

3.4.4 Key Activities Proposed for September 2006

The following activities are planned for September 2006:

- Continue of paddy field clearance in Krueng Sabee sub-district.
 - Commence MSW collection in Calang and Lamno.
 - Continue *sawah* clearance (tsunami waste removal from fields) in Lamno sub district.
 - Recruiting temporary workers from IDPs or local communities in supporting the program.
 - Commence of building demolition project in Kota Calang and its surrounding areas.
 - Commence of Lamno dumpsite located in Babah le village.
-

3.5 NIAS SELATAN

3.5.1 Key Achievements in August 2006

- Finalization of project implementation plan including the recruitment of project staff.
- Mobilization of heavy equipments to Nias Selatan (through Teluk Dalam harbor)
- Continue coordination and development of agreements between UNDP and local government partners in waste management in Teluk Dalam.

3.5.2 Key Activities to Date

- Environmental and technical assessment of dumpsite options around Teluk Dalam.
- Review of MSW and associated issues (drainage, street sweeping) in Teluk Dalam.
- Liaison with government departments and NGOs (ILO, SAB-SAS, ICMC) working in Nias Selatan.
- LOA for Nias Selatan under TRWMP signed by Bupati Nias Selatan.

3.5.3 Key Activities Proposed for September 2006

- Continue the mobilization process of heavy equipment to Nias Selatan (Teluk Dalam).
 - Construction of access road to Hilitobara dumpsite and commencement of MSW collection in Teluk Dalam.
-

3.6 NIAS

3.6.1 Key Achievements in August 2006

- Signing of Nias LoA and development of the initial project implementation plan including starting the recruitment process for project staff and preparing the logical framework.
- Continue coordination and development of agreements between UNDP and local government partners in waste management in Gunung Sitoli and Lahewa.
- Initial preparation on mobilizing heavy equipments to Nias (Lahewa).

3.6.2 Key Activities to Date

- Environmental and technical assessment of dumpsite options around Lahewa.
- Review of MSW and associated issues (drainage, street sweeping) in Lahewa.
- Liaison with government departments and NGOs (ACTED, FRC, Oxfam, Help Germany) working in Nias.

3.6.3 Key Activities Proposed for September 2006

- Mobilization of heavy equipment to Nias (Lahewa).
 - Commence construction of Nias dumpsite in Moawo, Lahewa.
-

3.7 ACEH BESAR

3.7.1 Key Achievements in August 2006

- Commence of tsunami waste recovery activities in paddy fields, located in Layeun village. Approximately 3,299m³ of tsunami waste was recovered from 10ha of paddy fields cleared. Around 42 local farmers will be able to resume their agriculture business in the near future.
- Clearance of 476m³ of tsunami waste from Lampaya and Moniken Village.
- Recruit 66 temporary workers to support TRWMP activities in Layeun (*sawah field*), Jantho dumpsite, and garbage separation in Lampaya and Moniken village.
- Continue construction on Jantho dumpsite located in Buket Meusara Village.

3.7.2 Status against Key Performance Indicators

Key Performance Indicator	August 2006	Total TRWMP in Aceh Besar
Tsunami waste cleared (m ³)	3,775	3,775
Municipal waste collected / disposed (m ³)	-	-
Sawah / tambak /land rehabilitated (ha)	10	10
Tsunami / earthquake buildings demolished (no.)	-	-
Drains cleared (average km per day)	-	-
Roads swept (average km per day)	-	-
Temporary workers (average no. per day)	66	66
Male workers (%)	64%	64%
Female workers (%)	36%	36%
Internally Displaced Persons (IDPs) amongst workers (%)	-	-
Ex-Free Aceh Movement (GAM) amongst workers (% per month)	-	-
Beneficiaries employed in waste livelihood projects (average no. per day)	-	-
Heavy equipment leased (average no. per day)	10	10
Dumpsites upgraded / rehabilitated (no.)	1	1
Waste cells (ha)	-	0.15
Daily cover for waste area (ha)	-	-
Recovered materials beneficially recycled		
Roads rehabilitated / reclaimed with rubble, new road (km)	-	-
Timber stockpiled for future re-use (m ³)	-	-
Timber provided to NGOs for reconstruction efforts (m ³)	-	-
Recovered wood processed into condition suitable for recycling (m ³)	-	-
Furniture units (e.g. table, cupboard, etc) completed (no.)	-	-

3.7.3 Key Activities to Date

- Capacity building with Kantor Kebersihan, Pertamanan dan Pemadam Kebakaran (KKP).
- Environmental and technical assessment of dumpsite options around Jantho.
- Assessment of tsunami waste around Lhok Nga and Leupung.
- Sawah clearance (tsunami waste removal from fields and drainage) in Layeun village, Leupung sub-district.
- Preliminary assessment on potential site for constructing a transfer station (TPS) in/around Jantho, Saree and Selimum.
- Continue the construction of Buket Meusara dumpsite in Jantho town.

3.7.4 Key Activities Proposed for September 2006

- Commence of Municipal waste collection in Aceh Besar.
- Finalization of *sawah* clearance in Layeun village and continuation of tsunami waste clearance around Lhoknga sub-district.

- Finalization of site plan and community meeting for selecting a transfer station site around Jantho, Lambaro, Seulimum and Saree market.
-

4. TRWMP – LIVELIHOODS ACTIVITIES

Proposals for Organizations / Firms to Manage Tsunami Waste Management Related Livelihoods Activities were assessed in June and contractual matters with preferred bidders are now being finalised by UNDP.

The 'Livelihoods Component' will support livelihood restoration and creation projects related to the waste management process in order to maximize the reuse of recovered materials, minimize the volume of waste requiring ultimate disposal, and create opportunities for viable recycling business startups. For these projects, UNDP will work with interested NGOs, the private sector, donors and government.

5. TRWMP BACKGROUND

The Tsunami Recovery Waste Management Programme (TRWMP) aims to build capacity in government, create immediate employment and longer-term livelihoods in waste management whilst benefiting the environment through collection, recovery and recycling of waste materials for use in rehabilitation and reconstruction.

The TRWMP commenced in March 2005 and is being executed by the United Nations Development Programme (UNDP) through the Aceh Emergency Response & Transitional Recovery (ERTR) Programme in partnership with the Badan Rehabilitasi dan Rekonstruksi (BRR), and implemented through partnerships with local Government in the target districts. Since 26th September 2005 the programme is being funded through a US\$15.2 million grant from the Multi-Donor Fund for Aceh and Nias.

This programme has been designed to provide municipal / district government with financial and technical support to achieve the following results:

- (1) Resumption of MSW collection & disposal and clearance / recycling of tsunami derived wastes via the implementation of Tsunami Waste Recovery Facilities (TWRFs);
 - (2) The rehabilitation of existing dumpsites, provision of temporary/ emergency dumpsites and in the longer term, sanitary landfills for enhanced, safer waste disposal;
 - (3) Interim livelihood restoration and longer term waste management livelihood creation via implementation of waste recycling/ recovery projects; and
 - (4) Effective and efficient management, monitoring and oversight of the overall programme on behalf of the Multi Donor Fund partners.
-

6. UNDP WASTE TEAM CONTACTS

If you would like to find out more about the work of the TRWMP, please do not hesitate to contact one of the UNDP Waste Team.

Tim Walsh	Waste Management Advisor	0811 8293 47	tim.walsh@undp.org
Nicholas Brooks	Associate Waste Management Advisor	0813 6041 3615	nicholas.brooks@undp.org
Antun Hidayat	Programme Coordinator	0813 6037 4081	antun.hidayat@undp.org
Hendra Siregar	Programme Officer	0813 6056 7896	hendra.siregar@undp.org
Ferhad Alsadad	Programme Associate, Aceh Barat, Nagan Raya, Nias, Nias Selatan and Aceh Jaya	0812 6938 297	ferhad.alsadad@undp.org
Kris Cahyanto	Programme Associate, Banda Aceh, Aceh Besar, Pidie	0858 3404 1725	kris.cahyanto@undp.org
Aida Novita	Programme Assistant, Kota Banda Aceh	0813 6050 3193	aida.novita@undp.org
Agus Mahdi	Programme Assistant, Aceh Besar	0813 6046 7421	agus.mahdi@undp.org
Herlina Sjaifuddin	Programme Assistant, Pidie	0813 6050 3106	herlina.sjaifuddin@undp.org
Boyke Sirait	Programme Assistant, Aceh Barat and Nagan Raya	0813 6096 9443	boyke.sirait@undp.org
Noka Prihasto	Programme Assistant, Nias and Nias Selatan	0815 6093 343	nokaprihasto@undp.org
Muhammad Afdhal	Programme Assistant, Aceh Jaya	0812 6927 329	muhammad.afdhal@undp.org