

| <div><div>Results of Financial Evaluation (modified)</div><table><tr><th colspan="4">F/S-1 Full-fledged project: initial investment 17.8 billion MNT</th></tr><tr><th>Case</th><th></th><th>Tax</th><th>FIRR</th></tr><tr><td>1</td><td>No grant</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>2.0%</td></tr><tr><td>2</td><td>A half of initial investment is financed through a grant.</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>2.6%</td></tr><tr><td>3</td><td>All initial investment is financed through a grant.</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>1.9%</td></tr></table> <table><tr><th colspan="4">F/S-2 Project without NERC: initial investment 11.3 billion MNT</th></tr><tr><th>Case</th><th></th><th>Tax</th><th>FIRR</th></tr><tr><td>1</td><td>No grant</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>1.7%</td></tr><tr><td>2</td><td>A half of initial investment is financed through a grant.</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>1.7%</td></tr><tr><td>3</td><td>All initial investment is financed through a grant.</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>1.5%</td></tr></table> <table><tr><th colspan="4">F/S-3 Project without NERC and NERC: initial investment 3 billion MNT</th></tr><tr><th>Case</th><th></th><th>Tax</th><th>FIRR</th></tr><tr><td>1</td><td>No grant</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>2.1%</td></tr><tr><td>2</td><td>A half of initial investment is financed through a grant.</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>1.4%</td></tr><tr><td>3</td><td>All initial investment is financed through a grant.</td><td>Household 1,700MNT/month Business 30,000MNT/year</td><td>3.8%</td></tr></table></div> | F/S-1 Full-fledged project: initial investment 17.8 billion MNT | | | | Case | | Tax | FIRR | 1 | No grant | Household 1,700MNT/month Business 30,000MNT/year | 2.0% | 2 | A half of initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 2.6% | 3 | All initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 1.9% | F/S-2 Project without NERC: initial investment 11.3 billion MNT | | | | Case | | Tax | FIRR | 1 | No grant | Household 1,700MNT/month Business 30,000MNT/year | 1.7% | 2 | A half of initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 1.7% | 3 | All initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 1.5% | F/S-3 Project without NERC and NERC: initial investment 3 billion MNT | | | | Case | | Tax | FIRR | 1 | No grant | Household 1,700MNT/month Business 30,000MNT/year | 2.1% | 2 | A half of initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 1.4% | 3 | All initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 3.8% | <div><div>Expected Cash Flow of the Project</div><div>F/S-1: Full-fledged project: initial investment 17.8 billion MNT</div><div>Case 2: A half of initial investment is financed through a grant.</div><table><tr><th>Year</th><th>Total</th><th>Revenue</th><th>Net Income</th><th>Revenue from Gar Area</th></tr><tr><td>2006</td><td>307,800</td><td>0</td><td>-307,800</td><td>0</td></tr><tr><td>2007</td><td>8,791,621</td><td>0</td><td>-8,791,621</td><td>0</td></tr><tr><td>2008</td><td>1,809,039</td><td>5,193,650</td><td>-415,574</td><td>845,606</td></tr><tr><td>2009</td><td>4,005,019</td><td>5,370,627</td><td>-430,966</td><td>843,174</td></tr><tr><td>2010</td><td>3,849,156</td><td>5,954,431</td><td>109,079</td><td>856,813</td></tr><tr><td>2011</td><td>4,210,000</td><td>6,214,468</td><td>104,967</td><td>1,061,578</td></tr><tr><td>2012</td><td>4,075,217</td><td>6,468,271</td><td>815,133</td><td>1,153,390</td></tr><tr><td>2013</td><td>4,232,572</td><td>6,551,196</td><td>812,618</td><td>1,109,658</td></tr><tr><td>2014</td><td>4,081,718</td><td>5,912,604</td><td>971,287</td><td>1,067,795</td></tr><tr><td>2015</td><td>3,936,455</td><td>5,106,183</td><td>-2,675,271</td><td>1,027,559</td></tr><tr><td>2016</td><td>4,170,618</td><td>5,365,356</td><td>1,192,896</td><td>958,189</td></tr><tr><td>2017</td><td>4,652,189</td><td>5,344,962</td><td>912,274</td><td>898,562</td></tr><tr><td>2018</td><td>4,340,891</td><td>5,554,709</td><td>1,884,818</td><td>833,192</td></tr><tr><td>2019</td><td>4,190,269</td><td>5,934,739</td><td>202,520</td><td>776,951</td></tr><tr><td>2020</td><td>-1,841,285</td><td>6,150,651</td><td>9,991,916</td><td>724,567</td></tr></table><div>FIRR: 2.6%</div></div> | Year | Total | Revenue | Net Income | Revenue from Gar Area | 2006 | 307,800 | 0 | -307,800 | 0 | 2007 | 8,791,621 | 0 | -8,791,621 | 0 | 2008 | 1,809,039 | 5,193,650 | -415,574 | 845,606 | 2009 | 4,005,019 | 5,370,627 | -430,966 | 843,174 | 2010 | 3,849,156 | 5,954,431 | 109,079 | 856,813 | 2011 | 4,210,000 | 6,214,468 | 104,967 | 1,061,578 | 2012 | 4,075,217 | 6,468,271 | 815,133 | 1,153,390 | 2013 | 4,232,572 | 6,551,196 | 812,618 | 1,109,658 | 2014 | 4,081,718 | 5,912,604 | 971,287 | 1,067,795 | 2015 | 3,936,455 | 5,106,183 | -2,675,271 | 1,027,559 | 2016 | 4,170,618 | 5,365,356 | 1,192,896 | 958,189 | 2017 | 4,652,189 | 5,344,962 | 912,274 | 898,562 | 2018 | 4,340,891 | 5,554,709 | 1,884,818 | 833,192 | 2019 | 4,190,269 | 5,934,739 | 202,520 | 776,951 | 2020 | -1,841,285 | 6,150,651 | 9,991,916 | 724,567 | <div><div>Sensitivity Analysis</div><table><tr><th rowspan="2"></th><th colspan="2">Waste Collection Fee</th><th rowspan="2">Necessary Annual Amount of Subsidy</th></tr><tr><th>Apartment</th><th>Ger</th></tr><tr><td>1</td><td>1,700 MNT</td><td>0</td><td>0.88 billion MNT</td></tr><tr><td>2</td><td>1,000 MNT</td><td>1,000 MNT</td><td>1.66 billion MNT</td></tr><tr><td>3</td><td>1,000 MNT</td><td>0</td><td>2.18 billion MNT</td></tr></table></div> | | Waste Collection Fee | | Necessary Annual Amount of Subsidy | Apartment | Ger | 1 | 1,700 MNT | 0 | 0.88 billion MNT | 2 | 1,000 MNT | 1,000 MNT | 1.66 billion MNT | 3 | 1,000 MNT | 0 | 2.18 billion MNT |
|--|---|--|------------------------------------|-----------------------|------|--|-----|------|---|----------|---|------|---|---|---|------|---|---|---|------|---|--|--|--|------|--|-----|------|---|----------|---|------|---|---|---|------|---|---|---|------|---|--|--|--|------|--|-----|------|---|----------|---|------|---|---|---|------|---|---|---|------|---|------|-------|---------|------------|-----------------------|------|---------|---|----------|---|------|-----------|---|------------|---|------|-----------|-----------|----------|---------|------|-----------|-----------|----------|---------|------|-----------|-----------|---------|---------|------|-----------|-----------|---------|-----------|------|-----------|-----------|---------|-----------|------|-----------|-----------|---------|-----------|------|-----------|-----------|---------|-----------|------|-----------|-----------|------------|-----------|------|-----------|-----------|-----------|---------|------|-----------|-----------|---------|---------|------|-----------|-----------|-----------|---------|------|-----------|-----------|---------|---------|------|------------|-----------|-----------|---------|--|--|----------------------|--|------------------------------------|-----------|-----|---|-----------|---|------------------|---|-----------|-----------|------------------|---|-----------|---|------------------|
| F/S-1 Full-fledged project: initial investment 17.8 billion MNT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Case | | Tax | FIRR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | No grant | Household 1,700MNT/month Business 30,000MNT/year | 2.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | A half of initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 2.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | All initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 1.9% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F/S-2 Project without NERC: initial investment 11.3 billion MNT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Case | | Tax | FIRR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | No grant | Household 1,700MNT/month Business 30,000MNT/year | 1.7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | A half of initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 1.7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | All initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 1.5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F/S-3 Project without NERC and NERC: initial investment 3 billion MNT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Case | | Tax | FIRR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | No grant | Household 1,700MNT/month Business 30,000MNT/year | 2.1% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | A half of initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 1.4% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | All initial investment is financed through a grant. | Household 1,700MNT/month Business 30,000MNT/year | 3.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year | Total | Revenue | Net Income | Revenue from Gar Area | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2006 | 307,800 | 0 | -307,800 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2007 | 8,791,621 | 0 | -8,791,621 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2008 | 1,809,039 | 5,193,650 | -415,574 | 845,606 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2009 | 4,005,019 | 5,370,627 | -430,966 | 843,174 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2010 | 3,849,156 | 5,954,431 | 109,079 | 856,813 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011 | 4,210,000 | 6,214,468 | 104,967 | 1,061,578 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012 | 4,075,217 | 6,468,271 | 815,133 | 1,153,390 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013 | 4,232,572 | 6,551,196 | 812,618 | 1,109,658 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 | 4,081,718 | 5,912,604 | 971,287 | 1,067,795 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | 3,936,455 | 5,106,183 | -2,675,271 | 1,027,559 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 4,170,618 | 5,365,356 | 1,192,896 | 958,189 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 4,652,189 | 5,344,962 | 912,274 | 898,562 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | 4,340,891 | 5,554,709 | 1,884,818 | 833,192 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2019 | 4,190,269 | 5,934,739 | 202,520 | 776,951 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2020 | -1,841,285 | 6,150,651 | 9,991,916 | 724,567 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Waste Collection Fee | | Necessary Annual Amount of Subsidy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Apartment | Ger | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1,700 MNT | 0 | 0.88 billion MNT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 1,000 MNT | 1,000 MNT | 1.66 billion MNT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 1,000 MNT | 0 | 2.18 billion MNT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>③ Preparation work for the Pilot Project for Collection System Improvement</div><div><div>Preparation work for the pilot project for collection system improvement will start from May 8.</div><div>The Study Team needs a C/P for the work. Because it requires contact of housing association and residents. It might requires cooperation of officers of the Duureg and Khorooos.</div><div>The work also important to show capability of MUB to JICA.</div></div></div> | <div>Thank You Very Much for your attention</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>Technical Working Group Meeting (42)</div><div>for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</div><div>May 12, 2006</div><div>JICA Study Team</div></div> | <div><div>1. Work Progress</div><div><div>① Data Collection at WB</div><div>② Update of WB Database System</div><div>③ Examination of EIA Study</div><div>④ Holding of 3rd Public Hearing Meeting</div><div>⑤ Analysis of Data obtained by the Mixed Combustion Test of RDF with Coal</div><div>⑥ Preparation of Pilot Project for Collection System Improvement</div><div>⑦ Construction of a Buffer Zone at UCDS</div><div>⑧ Preparation of Additional Pilot Project at UCDS</div><div>⑨ Examination of Financial System</div></div></div> | <div><div>2. Works for the Following Week</div><div><div>① Data Collection at WB</div><div>② Update of WB Database System</div><div>③ Follow-up Work of 3rd Public Hearing Meeting</div><div>④ Seminar for Mixed Combustion Test of RDF with Coal</div><div>⑤ Preparation of Pilot Project for Collection System Improvement</div><div>⑥ Construction of a Buffer Zone at UCDS</div><div>⑦ Preparation of Additional Pilot Project at UCDS</div><div>⑧ Organization of Waste Pickers</div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>3. Subjects to be discussed</div><div><div>① Waste Pickers Meeting No2 Topic on 13 May 2006</div><div>② Results of the 1st Mixed Combustion Test of RDF with Coal</div></div></div> | <div><div>① Waste Pickers Meeting No2 Topic on 13 May 2006</div></div> | <div><div>Organization of WPs</div><div><div>1. Registration of WPs Update Registration Database As of 6 Dec 2005, 386 individuals, 186 family</div><div>2. Clarification of Groups Groups 1, 2, 3, . . . , Others</div><div>3. Selection of Leaders from each group • If no leader, how to do • How to deal with WPs who does not belong to any group</div><div>4. Selection of Leader of the Leaders</div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>② Results of the 1st Mixed Combustion Test of RDF with Coal</div></div> | <div><div>Objectives of the Test</div><div><div>① To mainly investigate degree of negative impacts which may be caused by mixed combustion of RDF with coal at the existing heating plant;</div><div>② To demonstrate citizens in MUB both negative and positive impacts of the mixed combustion of RDF with coal at the existing heating plant in order to obtain the consensus to implement the proposed M/P regarding thermal recycle "RDF"; and</div><div>③ To examine economic viability of the use of RDF at the existing heating and/or power generation plant. => It may need long term use.</div></div></div> | <div><div>Negative Impacts</div><div><div>① Generation of air pollutants such as black smoke, dust, SOx, NOx and HCl;</div><div>② Generation of dioxins; and</div><div>③ Damage to the internal furnace due to higher combustion temperature than pure coal combustion.</div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div>Outline of the Test (1)</div><div><div>■ The M/P proposes to use RDF at the existing power plants in which continuous and higher combustion of it is done in order to reduce adverse impacts.</div><div>■ Even if RDF is produced at maximum amount in the target year of F/S, i.e. 2010, the portion of RDF mixture to coal is less than 4% in weight [1]. Calorific value of RDF is estimated as two times of that of coal. So mixing 4 % of RDF means 8% in terms of calorific value.</div></div><div><div>[1] No. 3 power plant has 13 furnaces and two of them are fluid type furnaces which will be able to burn particle type fuel like RDF. However, the other furnaces of the existing power plants uses powder coal which can not burn RDF without providing grades.</div></div></div> | <div><div>Outline of the Test (2)</div><div><div>■ Compare with the mixed combustion of RDF at the power plants, it at the Nalaikh heating plant may cause more serious negative impacts. It is, therefore, more convenient to conduct the combustion test at the Nalaikh heating plant.</div><div>■ Furthermore, since available RDF amount for the test was very limited, i.e. about 12 tons, mix proportion of RDF to coal is decided at 2 % and 4 % in weight (4% and 8 % in terms of calorific value) in this test.</div><div>■ In the test RDF and coal were mixed and burned in the furnace and to obtain combustion data, check equipment running condition and inspect combustion conditions visually.</div></div></div> | <div><div>Outline of the Test (3)</div><div><div>■ There were four kinds of combustion tests, 1. Preliminary test, 2. Baseline test for 100% coal combustion, 3. Mixed combustion of RDF (of 2% in weight) with coal and 4. Mixed combustion of RDF (of 4% in weight) with coal. In the preliminary combustion test, lower mixing rate was applied first to carefully check the combustion conditions such as relevant equipment and exhaust gasses then, to increase mixing proportion gradually.</div><div>■ Mixed combustion tests of RDF (of 2% and 4% in weight) with coal will be carried out more than 10 hours continuously. Necessary data will be collected to investigate the negative impacts. In addition suitability of the equipment and economical aspects will also be examined.</div><div>■ It requires more than 2 hours operation during obtaining data for dioxin analysis.</div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4-189

4-190

Rule 2 : How to deal with people who does not want to be registered.

- Those people will be notified by **signboard** located nearby moveable fence saying that;
 - WP organization work is now under way
 - Conditions to be a member (over 17 years, permanent worker)
 - Non member will be prohibited to use future facilities such as sorting yard and fair trading center

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Rule 3: How to Identify members

Most WP are agree to have **ID cards** since any type of clothes may not last long to wear. However, some says that in order groups to be identified **vests** could be useful if right cloth material would be chosen. Basically, WPs wish ID cards issued by JICA ST and vests can be covered by WP themselves, if it is not possible to be supplied by JICA ST.

12

3rd Monitoring Committee Meeting (MCM) for UCDS

Objective of the Monitoring Committee

- Operation and facilities of UCDS has to be monitored regularly in order to maintain improved conditions.
- New pilot projects such as sorting yard and fair trading facilities will be implemented soon. Green belt has been constructed already. Therefore, Monitoring Committee Mtg. shall be carried out now.

Schedule of MCM-3rd

- Date : 24th May 2006 (Wednesday)

| | Description | Time | Remarks |
|---|---|---------------|------------------------------|
| 1 | Moving to UCDS from MUB | 15:00 - 15:45 | Transportation by JICA |
| 2 | Assessment of Operation and Facility in the field | 15:45 - 16:00 | Observation from MUB |
| 3 | Discussion about assessment in Warm Garden | 16:00 - 16:20 | Facilitator: Mr. Oyuntsetseg |
| 4 | Moving back to MUB | 16:20 - 17:00 | Transportation by JICA |

Monitoring Committee

| | |
|----------------|--|
| Oyuntsetseg | City Inspection Agency |
| Altantogs | Khoroo 3, coordinator |
| S. Moronchimeg | Khoroo 4, former environment inspector |
| G.Enhjargal | Khoroo 4, residents' hospital |
| Chagtsal | Khoroo 4, school teacher |
| Darisurem | Khoroo 4, resident |
| Olzijaargal | Khoroo 3, resident |
| M.Montsetseg | Tolgoit, NGO |
| Ch.Batsaihan | MUB |
| Delgerbayar | MUB |
| M.Sarantuya | MOE |
| Enhee | World Vision |
| Baatarjav | Baigal-Erdene Foundation, NGO |

Check List for the regular monitoring - 1

Environment Effect

| No | Items | Acceptable | Medium | Terrible |
|----|----------------------------|------------|--------|----------|
| A1 | Fire & Smoke | 3 | 2 | 1 |
| A2 | Offensive odor | 3 | 2 | 1 |
| A3 | Wastewater | 3 | 2 | 1 |
| A4 | Waste scattering | 3 | 2 | 1 |
| A5 | Animals (dogs, birds, etc) | 3 | 2 | 1 |
| A6 | Vermin (flies, worms, etc) | 3 | 2 | 1 |
| A7 | View | 3 | 2 | 1 |

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Check List for the regular monitoring - 2

Operational Conditions

| No | Items | Well controlled or operate | Medium | Terrible |
|----|---|----------------------------|--------|----------|
| A8 | Whole operation | 3 | 2 | 1 |
| A9 | Working situations of waste pickers | 3 | 2 | 1 |
| A1 | Collection vehicles | 3 | 2 | 1 |
| A1 | Buildozer and other landfill operation heavy vehicles | 3 | 2 | 1 |
| A1 | Location of unloading waste | 3 | 2 | 1 |

Check List for the regular monitoring - 3

Function of Facilities

| No | Items | Functioning | Medium | Not-functioning |
|----|---|-------------|--------|-----------------|
| B1 | Access road | 3 | 2 | 1 |
| B2 | Weighbridge (measurement facilities and computer) | 3 | 2 | 1 |
| B3 | On-site road | 3 | 2 | 1 |
| B4 | Working face (Movable type of fence for preventing waste scattering, etc) | 3 | 2 | 1 |
| B5 | Gas removal facilities | 3 | 2 | 1 |
| B6 | Security facilities (Fence (fixed type), Gate, Bank) | 3 | 2 | 1 |
| B7 | Leachate treatment facilities | 3 | 2 | 1 |
| B8 | Drainage systems | 3 | 2 | 1 |

③ Schedule and Work Responsibility for Pilot Project for Collection System Improvement

Important Issues for Collection System Improvement

- The system and rules shall be suitable for the collection area. => Proper plan
- Once the system and rules are decided, dischargers shall be well-informed about them. => Dissemination => Cooperation
- Collection service provider shall strictly follow the system and rules decided.

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Proposed Schedule (1)

| | May | Jun | Jul | Aug | Sep |
|---|-----|-----|-----|-----|-----|
| S1 Consensus formation | | | | | |
| S2 Baseline survey | | | | | |
| S3 Modification planning of collection system | | | | | |
| S3 Formation of discharge rules | | | | | |
| S3 Preparation of educational tools | | | | | |
| S4 Training of TUK staff | | | | | |
| S4 Dissemination of information | | | | | |
| S5 Implementation | | | | | |

Proposed Schedule (1)

- Compaction trucks for the pilot project (PP) will arrive in July.
- PP for Collection System Improvement will **start mid-August**.
- In order to start at the time we should conduct 4 steps of preparation works.

21

First Step: Consensus formation (it is under way)

- To make the roles and responsibilities of each organization clear
- Our proposal is presented in the next screen.

22

MUB/Duureg/Khoroo

- To decide the collection system including the frequency
- To show residents/business how to discharge waste clearly
- To control the manner of discharger
- To enforce law and regulations

TUK

- To collect waste properly, according to the schedule established
- To take an effort to improve its collection work

HA/Local residents/business

- To discharge waste in a proper way, according to rules

Study team

- To give advice and support MUB/Duureg/Khoroo and TUK

Second Step: Baseline survey (it is under way)

- To collection necessary information and data
- To grasp the current conditions

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Third Step: Collection system modification plan, setting up discharge rules and preparation of educational tools

MUB/Duureg/Khoroo/TUK

- To modify the collection system
 - To provide a separate collection service for restaurant/café/pub
 - To decrease the frequency of the collection service
- To make discharge rules in cooperation with TUK and HA
- To prepare educational materials

Fourth Step: Dissemination of the modified collection system and discharge rules planned

MUB/Duureg/Khoroo/TUK

- To disseminate information of the modified collection system.
- To explain the importance of separate collection and how to sort and store recyclables.
- To make newly established discharge rules known widely

through various meetings and distributed materials

Fifth Step: Implementation

- To start the new collection system
- To start a recycling program

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Thank You Very Much for
Your Attention

Technical Working Group
Meeting (44)
for THE STUDY ON SOLID WASTE
MANAGEMENT PLAN FOR ULAANBAATAR CITY

May 26, 2006
JICA Study Team

1 . Work Progress

- ① Data Collection at WB
- ② Maintenance of Buffer Zone
- ③ Preparation of Pilot Project for Collection System Improvement
- ④ 3rd Monitoring Committee at UCDS
- ⑤ Preparation of Additional Pilot Project at UCDS
- ⑥ Organization of Waste Pickers

2. Works for the Following Week

- ① Data Collection at WB
- ② Maintenance of Buffer Zone
- ③ Preparation of Pilot Project for Collection System Improvement
- ④ Construction of Sorting Yard and Onsite Road
- ⑤ Preparation of Additional Pilot Project at UCDS
- ⑥ Organization of Waste Pickers

3. Subjects to be discussed

- ① Results of 4th Waste Picker Meeting
- ② Results of 3rd Monitoring Committee
- ③ Pilot Project for Collection System Improvement

① Results of 4th Waste
Picker Meeting held on 25
May 2006

Progress of Organization of WP s

1. Registration of WP s
Update Registration Database
As of 23 May 2006, 234 individuals
2. Clarification of Groups
Groups 1,2,3,4,5,6,7,8, 9,10

| Group Number | Name | Age | Sex | Number of Members |
|---------------------|-------------------------|-----|--------|---------------------|
| Chairman | Бүлэг сайн Сүрэнпүрэв | 56 | male | 2006/5/18 2006/5/23 |
| Leader of the Group | | | | |
| 1 | Наранцзор Ганзориг | 44 | male | 25 26 |
| 2 | Бадармаа Янзигорлоо | 40 | Female | 24 24 |
| 3 | Пүрэгийн Ганзориг | 44 | Female | 26 26 |
| 4 | Пүрэгийнмаа Түвшин | 43 | Female | 22 23 |
| 5 | Сүрэнпүрэв Ганзориг | 28 | male | 16 25 |
| 6 | Сүрэнпүрэв Цэцэгмаа | 42 | Female | 21 24 |
| 7 | Цэцэгмаа Амангэл | 32 | male | 21 23 |
| 8 | Увсгийнмаа | | | 26 |
| 9 | Увсгийнмаа | 24 | male | 24 |
| 10 | Лувсанпүрэв Лувсанпүрэв | 53 | male | 18 11 |
| Others | | | | |
| Total | | | | 173 234 |

What was Decided so far

1. Who is entitled to be a member
 - People above 17 years
 - Permanent worker
2. How to deal with people who does not want to be a member
 - Registration will be closed by end of May 2006
3. How to Identify Member
 - Issue ID Card : financed by JICA

4. Maximum number of people for each group is 28.
5. 10 groups are fixed and no more new group will be added.
6. In case any people want to join to the group and other members accept, they are allowed to be a member but up to 28 people in each group.

IDENTIFICATION CARD

Photo

ID Number

Father's name

Given name

Date of Birth

Gender

Date of Issue

Validity Period

Signature & Stamp of Issuing Authority

Disposal Site Worker

New matter arises

1. There are some children who does not have national registration ID, so they were refused to enter school instead of they are willing to go.

Are there any solution?

②results of 3rd Monitoring
Committee Meeting (MCM) for
UCDS

Attendance

Attendance List of Monitoring Committee Members:






| | |
|--------------|---------------------------------------|
| Oyunsetseg | City Inspection Office |
| Delgerbayar | MUB |
| Saranfuya | MOE |
| Sharavdorj | Leader of Mongolian Ecologist |
| Monhtsetseg | Tolgoit, NGO |
| Uranchimeg | Horoo 4, former environment inspector |
| Ariuntsetseg | Horoo 4, nurse of hospital |
| Chagtsal | Horoo 4, school teacher |
| Norov | Horoo 4, head of resident's committee |
| Altanlogs | Horoo 3, coordinator |
| Oltijargal | Horoo 3, resident |








Monitoring Assessment – 1
3:best, 2:Midium, 1: Worst

| Item | 1st | 2nd | 3rd |
|----------------------|-----|-----|-----|
| A1: Fire and Smoke | 1.1 | 2.5 | 2.0 |
| A2: Odor | 1.1 | 2.4 | 2.0 |
| A3: Waste Water | 1.4 | 2.8 | 2.8 |
| A4: Waste Scattering | 1.0 | 2.4 | 2.2 |
| A5: Animals | 1.2 | 2.5 | 2.5 |
| A6: Vermin | 1.1 | 2.7 | 2.7 |
| A7: View | 1.0 | 2.6 | 2.5 |
| Average | 1.1 | 2.6 | 2.4 |




Monitoring Assessment - 2

| Item | 1st | 2nd | 3rd |
|------------------------------|-----|-----|-----|
| A8: Whole Operation | 1.0 | 2.6 | 2.8 |
| A9: Working Condition of WPs | 1.1 | 1.9 | 1.8 |
| A10: Collection Vehicles | 1.0 | 2.6 | 2.5 |
| A11: Bulldozers | 1.1 | 2.6 | 2.3 |
| A12: Waste Dumping Locations | 1.0 | 2.8 | 2.4 |
| Average | 1.0 | 2.5 | 2.4 |

| <div>Monitoring Assessment - 3</div> <table><tr><th>Item</th><th>1st</th><th>2nd</th><th>3rd</th></tr><tr><td>B1: Access Road</td><td></td><td>2.9</td><td>2.8</td></tr><tr><td>B2: Weighbridge</td><td></td><td>2.8</td><td>3.0</td></tr><tr><td>B3: On site road</td><td></td><td>2.9</td><td>2.3</td></tr><tr><td>B4: Movable Fence</td><td></td><td>2.9</td><td>2.4</td></tr><tr><td>B5: Gas removal facility</td><td></td><td>2.9</td><td>2.9</td></tr><tr><td>B6: Security fence, gate,</td><td></td><td>2.9</td><td>2.5</td></tr><tr><td>B7: Leachate treatment facilities</td><td></td><td>2.9</td><td>2.6</td></tr><tr><td>B8: Drainage System</td><td></td><td>2.8</td><td>2.3</td></tr><tr><td>Average</td><td></td><td>2.9</td><td>2.6</td></tr></table> | Item | 1st | 2nd | 3rd | B1: Access Road | | 2.9 | 2.8 | B2: Weighbridge | | 2.8 | 3.0 | B3: On site road | | 2.9 | 2.3 | B4: Movable Fence | | 2.9 | 2.4 | B5: Gas removal facility | | 2.9 | 2.9 | B6: Security fence, gate, | | 2.9 | 2.5 | B7: Leachate treatment facilities | | 2.9 | 2.6 | B8: Drainage System | | 2.8 | 2.3 | Average | | 2.9 | 2.6 | <div>Comments by Committee Member</div> <div><div><div><div></div><div>Take into account the weather circumstances due to the fact, for example, on hot days there could be more vermin like flies. So, the suggestion is to conduct monitoring under different climate conditions;</div></div><div><div></div><div>The problem of the scattering waste by wind is very serious. So one possible solution is to build bible wire fence by the perimeter of the disposal site. If a new disposal site will have a green belt, it is important to construct 3-4 meter high bible wire fence on the internal side of green belt.</div></div><div><div></div><div>Although a green belt is to be constructed at future NEDS, there is a need of more trees to be planted at the border of the current disposal site. It will improve environment condition of this area even after closure of the disposal site.</div></div><div><div></div><div>There is a need to have shower or any other means for workers (Nuuts workers) to keep hygiene after the finish of working day.</div></div><div><div></div><div>To include a green belt condition evaluation in the check list.</div></div><div><div></div><div>The ways to better address a "dog issue".</div></div></div><div>17</div></div> | <div>Well Prepared by Nuuts Co !</div> <div></div> |
|--|---|--|-----|-----|-----------------|--|-----|-----|-----------------|--|-----|-----|------------------|--|-----|-----|-------------------|--|-----|-----|--------------------------|--|-----|-----|---------------------------|--|-----|-----|-----------------------------------|--|-----|-----|---------------------|--|-----|-----|---------|--|-----|-----|--|---|
| Item | 1st | 2nd | 3rd | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B1: Access Road | | 2.9 | 2.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B2: Weighbridge | | 2.8 | 3.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B3: On site road | | 2.9 | 2.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B4: Movable Fence | | 2.9 | 2.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B5: Gas removal facility | | 2.9 | 2.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B6: Security fence, gate, | | 2.9 | 2.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B7: Leachate treatment facilities | | 2.9 | 2.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B8: Drainage System | | 2.8 | 2.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Average | | 2.9 | 2.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>③ Pilot Project for Collection System Improvement</div> | <div>Modification of Collection System</div> | <div>Schedule</div> <div><div><div></div><div>To modify the collection system based on the data obtained (June-July)</div></div><div><div></div><div>To make the draft of discharge rules, according to the modified collection system (July - August)</div></div><div><div></div><div>To finalize the discharge rules based on the opinions and comments of Khoroo and HA (in the middle of August)</div></div></div> <div>21</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>To grasp the current collection system in Chingeltei (1)</div> <div><div><div></div><div>Mixed with several types of collection systems</div><div><div><div></div><div>Bell collection</div></div><div><div></div><div>Dust chute collection (in a part of Khoroo 5 & 6)</div></div><div><div></div><div>Container collection (in some areas, containers are still used)</div></div><div><div></div><div>Independent container collection (some new apartments have its own containers)</div></div></div></div></div> <div>22</div> | <div></div> <div>24</div> | <div>What's the future plan of TUK?</div> <div><div><div></div><div>Why some containers are still used in Khoroo 1 & 4? How long will these containers be used?</div></div><div><div></div><div>How to do with the dust chute collection system, when we modify the bell collection system?</div></div><div><div></div><div>How to collect waste from restaurant, café, pub and hotels?</div></div><div><div></div><div>How to collect waste from large scale office and commercial buildings?</div></div></div> <div>24</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>To grasp the current collection system in Chingeltei (2)</div> <div><div><div></div><div>Bell collection system does not work properly</div></div></div> <div><div><div></div><div>Bell Collection</div><div>a system in which a collection vehicle, driving slowly through the collection area, sounds its horn or plays music to announce its arrival. Residents who store their waste in the home bring it to the vehicle while the crew loads the waste.</div></div></div> <div>25</div> | <div><div><div><div><div></div><div>Bell Collection (comparison)</div></div><div></div><div><div>In UB</div><div>In Sri Lanka</div></div></div></div><div>26</div></div> | <div>Bell Collection in UB</div> <div><div><div></div><div>Only a small number of people bring their waste to the vehicle while the crew loads the waste.</div></div><div><div></div><div>Many residents discharge waste regardless of the collection schedule</div></div></div> <div>27</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Main Causes of Problems</div> <div><div><div></div><div>Irregular collection schedule</div></div><div><div></div><div>Inappropriate routs and collection points</div></div><div><div></div><div>Lack of Instruction to residences and business how to discharge waste by MUB/Dureg/Khoroo</div></div><div><div></div><div>Lack of law enforcement by MUB/Dureg/Khoroo</div></div><div><div></div><div>Low public awareness of SWM</div></div></div> <div>28</div> | <div><div><div><div><div></div><div>Collection Point</div></div><div></div></div></div><div>29</div></div> | <div><div><div><div></div><div>As a result of malfunctioned bell collection Waste Heaps are Observed throughout the PP area</div></div><div></div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div><div><div><div></div><div>By collecting waste twice a day, waste is removed before waste heaps become very large.</div></div><div><div></div><div>This makes the problem of waste heaps invisible</div></div></div><div><div></div><div>Most people can still ignore this problem, though this problem is potentially very serious. The level of awareness continues to be low</div></div></div> <div>31</div> | <div><div><div><div></div><div>It is difficult for MUB/TUK to continue to provide a collection service twice a day, and the decrease in the collection frequency will make this hidden problem obvious at a breath</div></div><div><div></div><div>MUB have to raise this issue urgently.</div></div></div></div> <div>32</div> | <div>Thank You Very Much for Your Attention</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|---|--|---|
| <p>Technical Working Group Meeting (45) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</p> <p>Jun 2, 2006 JICA Study Team</p> | <p>1 . Work Progress</p> <ol style="list-style-type: none"> ① Data Collection at WB ② Maintenance of Buffer Zone ③ Preparation of Pilot Project for Collection System Improvement ④ Construction of Sorting Yard and Onsite Road ⑤ Preparation of Additional Pilot Project at UCDS ⑥ Organization of Waste Pickers | <p>2. Works for the Following Week</p> <ol style="list-style-type: none"> ① Data Collection at WB ② Maintenance of Buffer Zone ③ Preparation of Pilot Project for Collection System Improvement ④ Construction of Sorting Yard and Onsite Road ⑤ Preparation of Additional Pilot Project at UCDS ⑥ Organization of Waste Pickers |
| <p>3. Subjects to be discussed</p> <ol style="list-style-type: none"> ① Regulation on Disposal Site Category, Landfill Facility, and Activities drafted by MOE ② Pilot Project for Collection System Improvement | <p>① Regulation on Disposal Site Category, Landfill Facility, and Activities drafted by MOE</p> <p>This regulation has many problems such as;</p> <ol style="list-style-type: none"> 1. Treatment (recycling) and disposal are mixed. 2. There is no proper waste categories. <ul style="list-style-type: none"> □ Toxic and non toxic □ Residential, industrial, medical Based on the categories, treatment and disposal method shall be determined 3. Compost is not feasible in UB but specified very detail. | <p>What do you request</p> <ol style="list-style-type: none"> 1. Option 1 : Just give comments like this 2. Option 2 : Modify the regulation but , basically, based on this regulation. 3. Option 3 : Completely ignore this draft regulation and prepare new one. In option 3, there needs a lot of input, under technical Cooperation Programme? |
| <p>② Pilot Project for Collection System Improvement</p> | <p>Schedule</p> <ol style="list-style-type: none"> 1. To modify the collection system based on the data obtained (June-July) 2. To make the draft of discharge rules, according to the modified collection system (July - August) 3. To finalize the discharge rules based on the opinions and comments of Khoroo and HA (in the middle of August) | <p>1 . Modification of Collection System</p> |
| <p>To grasp the current collection system in Chingeltei (1)</p> <ul style="list-style-type: none"> ■ Mixed with several types of collection systems <ul style="list-style-type: none"> □ Bell collection □ Dust chute collection (in a part of Khoroo 5 & 6) □ Container collection (in some areas, containers are still used) □ Independent container collection (some new apartments have its own containers) | <p>Bell Collection System</p>  | <p>Dust Chute Collection System</p>  |
| <p>1 Floor Dust Chute Storage</p>  | <p>Container Collection</p>  | <p>Dust chute collection</p>  |
| <p>What's the future plan of TUK?</p> <ul style="list-style-type: none"> ■ Why some containers are still used in Khoroo 1 & 4? How long will these containers be used? ■ How to do with the dust chute collection system, when we modify the bell collection system? ■ How to collect waste from restaurant, café, pub and hotels? ■ How to collect waste from large scale office and commercial buildings? | <p>To grasp the current collection system in Chingeltei (2)</p> <ul style="list-style-type: none"> ■ Bell collection system does not work properly <p>Bell Collection</p> <p>a system in which a collection vehicle, driving slowly through the collection area, sounds its horn or plays music to announce its arrival. Residents who store their waste in the home bring it to the vehicle while the crew loads the waste.</p> | <p>Bell Collection (comparison)</p>  <p>In UB</p>  <p>In Sri Lanka</p> |

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| <p>Maintenance of Facilities in UCDS</p> <ul style="list-style-type: none">□ Slope trimming of second Embankment dam and construction of third embankment dam□ Shifting Moveable Fence□ Medical Waste Pit<ul style="list-style-type: none">■ Gate is missing■ Wire net at fence was cut off and stolen | <p>No gate and no fence</p>  | <p>② Pilot Project for Collection System Improvement</p> | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|--------------------|-------|-----|----------------------------|--------------------|-------------------|--------------------|---------------|---|------|-----|----------------------|-----------------|--|-------------|-------------------------------------|---------------|--|-------------|----------------------|---------------|--------------|--------------------|---|
| <p>Schedule</p> <ol style="list-style-type: none">1. To modify the collection system based on the data obtained (June-July)2. To make the draft of discharge rules, according to the modified collection system (July - August)3. To finalize the discharge rules based on the opinions and comments of Khoroo and HA (in the middle of August) | <p>1 . Current Collection System</p> <table><tr><th>Type of waste</th><th>Frequency</th><th>Truck</th><th>Fee</th></tr><tr><td>Office, Department, Market</td><td>depend on contract</td><td>3 (1DT, 1RR, 1CT)</td><td>depend on contract</td></tr><tr><td>Road Cleaning</td><td>?</td><td>2 DT</td><td>MUB</td></tr><tr><td>Dust Chute Apartment</td><td>2 times a month</td><td></td><td>200T/person</td></tr><tr><td>Apartment with restaurant and shops</td><td>2 times a day</td><td></td><td>200T/person</td></tr><tr><td>Restaurant and shops</td><td>2 times a day</td><td>4 (1CT, 3DT)</td><td>depend on contract</td></tr></table> | Type of waste | Frequency | Truck | Fee | Office, Department, Market | depend on contract | 3 (1DT, 1RR, 1CT) | depend on contract | Road Cleaning | ? | 2 DT | MUB | Dust Chute Apartment | 2 times a month | | 200T/person | Apartment with restaurant and shops | 2 times a day | | 200T/person | Restaurant and shops | 2 times a day | 4 (1CT, 3DT) | depend on contract |  |
| Type of waste | Frequency | Truck | Fee | | | | | | | | | | | | | | | | | | | | | | | |
| Office, Department, Market | depend on contract | 3 (1DT, 1RR, 1CT) | depend on contract | | | | | | | | | | | | | | | | | | | | | | | |
| Road Cleaning | ? | 2 DT | MUB | | | | | | | | | | | | | | | | | | | | | | | |
| Dust Chute Apartment | 2 times a month | | 200T/person | | | | | | | | | | | | | | | | | | | | | | | |
| Apartment with restaurant and shops | 2 times a day | | 200T/person | | | | | | | | | | | | | | | | | | | | | | | |
| Restaurant and shops | 2 times a day | 4 (1CT, 3DT) | depend on contract | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Category of Waste Collection</p> <ul style="list-style-type: none">□ Residential Waste (Apartment with and without dust chute)□ Office, Big business like Department, Market□ Small business like a restaurant, shops□ Road Cleaning | <p>Frequency of collection</p> <ul style="list-style-type: none">□ Resident: ???□ Small business: ???□ Big business : depend on contract□ Road cleaning :depend on contract | <p>Separate collection</p> <ol style="list-style-type: none">1. Separate collection for residential waste2. Separate collection for restaurant, shop?3. Separate collection for Big business like a Department store?4. Separate collection for Office (at least MUB?) | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Next Step</p> <ul style="list-style-type: none">□ Set up collection route and point for all the residential waste□ Set up collection route and point for office in case separate collection will be introduced.□ Estimate the amount of waste to be collected per route.□ Calculate the required quantities of the truck |  | <p>Thank You Very Much for Your Attention</p> | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Technical Working Group Meeting (47) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</p> <p>Jun 16, 2006 JICA Study Team</p> | <p>1 . Work Progress</p> <ol style="list-style-type: none">① Data Collection at WB② Maintenance of Buffer Zone③ Preparation of Pilot Project for Collection System Improvement④ Construction of Sorting Yard and On-site Road⑤ Preparation of Fair Trade Center at UCDS⑥ Organization of Waste Pickers⑦ Follow up interview survey for Public Hearing Meeting no3⑧ Interview Survey for Business Entities | <p>2. Works for the Following Week</p> <ol style="list-style-type: none">① Data Collection at WB② Maintenance of Buffer Zone③ Preparation of Pilot Project for Collection System Improvement④ Construction of Sorting Yard and On-site Road⑤ Tender for Fair Trade Center at UCDS⑥ Organization of Waste Pickers⑦ Follow up interview survey for Public Hearing Meeting no3⑧ Interview Survey for Business Entities | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>3. Subjects to be discussed</p> <ol style="list-style-type: none">① Minutes of the 4th Workshop for RDF on Q&A Session, etc.② Comments on the draft standard for final disposal site③ Results of WP meeting No 6④ Pilot Project for Collection System Improvement | <p>① Minutes on Q&A Session of the 4th Workshop for RDF, etc.</p> <ul style="list-style-type: none">□ Minutes on Q&A Session of the 4th Workshop for RDF, etc. are prepared as attached.□ Relation to the Q&A, a reply regarding "Stockholm Convention and Comparison of Exhaust Gas Data with Japanese and European Emission Standards" is prepared.□ Please deliver these documents to the participants. | <p>Stockholm Convention</p> <ul style="list-style-type: none">□ The Stockholm Convention on Persistent Organic Pollutants (POPs) is an international treaty designed to end the production and use of some of the world's most poisonous chemicals. It does not provide an emission standard for exhaust gas.□ A11 of the chemicals targeted for action in the Stockholm Convention are Chlorinated chemicals. Most of these chemicals have been used to kill insects and other pests. Others were used as industrial chemicals, or were produced as a by-product of industrial processes including incineration. What they have in common is that they pose serious health risks to human populations and ecosystems. All POPs chemicals last for many years in the environment and can travel vast distances, transported by the air and water.□ The Convention targets twelve chemicals for action as shown in the table of the document. They include PCBs, Dioxins and DDT. | | | | | | | | | | | | | | | | | | | | | | | | |

Comparison of Exhaust Gas Data with Japanese and European Emission Standards (1)

- The Stockholm Convention does not provide an emission standard for exhaust gas and each state provides its own standard in USA. Therefore, the JICA study team compared the exhaust gas analysis data obtained by the 1st mixed combustion test with Japanese and EU Emission Standards.
- As for dioxins both Japanese and EU standards regulate emission limit value by TEQ (Toxic Equivalent). The EU standard regulates only 17 types of TEF (Toxic Equivalency Factor) for PCDDs and PCDFs excluding PCBs while Japanese standard regulates 29 types of TEF for PCDDs, PCDFs and PCBs.

Comparison of Exhaust Gas Data with Japanese and European Emission Standards (2)

Findings are:

- The emission gas data including **100% coal combustion** over the limit values of Japanese and EU standard regarding total dust and NOx.
- Although mixed combustion reduces concentration of SO2, the emission gas data over the limit values of EU standard on it.
- Although mixed combustion increases concentration of HCl and dioxins, the emission gas data including mixed combustion are far less than the limit values of Japanese and EU standard regarding HCl and dioxins.

Comments on the draft standard for final disposal site

Main comments are:

- Standards for final disposal site and recycling (composting, etc.) facilities shall be prepared separately.
- Standards for final disposal site for hazardous waste (HW) and non-hazardous waste shall be prepared separately. => **Categorization of waste is the first step to be done.**
- In principle HW waste shall not be disposed of at non-HW disposal site.
- HW disposal site shall be located far from the inhabitant.

Example of a waste category

| Category in Sub-group | Waste Category by Group | Sub-Waste Category | Detailed Waste Category or Description |
|------------------------------|------------------------------|---|---|
| Non-hazardous Waste (non-HW) | Municipal Waste | Domestic Waste | 1. Household waste 2. Institutional (school, government office, etc.) waste 3. Public area (road, drain, etc.) cleaning waste |
| | | Commercial Waste | 1. Commercial (shop, office, restaurant, hotel, etc.) waste 2. Market waste 3. Construction waste |
| | Industrial (Factory) Waste | Non-hazardous Industrial Waste (non-HW) | 1. Non-HW from non-production sources 2. Non-HW from production process |
| | | Medical Waste | General Medical Waste |
| | Hazardous Waste (HW) | Agricultural Waste | Agricultural Waste |
| Municipal Waste | | Hazardous Municipal Waste | 1. Domestic HW 2. Commercial HW |
| | | Industrial (Factory) Waste | Hazardous Industrial Waste (HW) |
| Medical Waste | | Medical Waste | 1. Infectious waste 2. Hazardous medical waste |
| Agricultural Waste | Hazardous Agricultural Waste | 1. Hazardous agricultural waste | |

Results of WP meeting No 6

Progress of ID Card Registration

| Chairman | Sub-Chairman | Group | Sex | Total | Photo | Photo |
|---------------------|----------------------|-------|--------|-------|-------|-------|
| Leader of the Group | | | | | | |
| 1 | Натанзориг Ганзориг | 44 | male | 23 | 20 | 3 |
| 2 | Бадармаа Ганзориг | 40 | Female | 25 | 19 | 6 |
| 3 | Гундунмаа Аюуш-Очи | 25 | male | 25 | 12 | 13 |
| 4 | Нугдунмаа Ууган | 43 | Female | 25 | 18 | 7 |
| 5 | Саранзориг Ган-Орбол | 54 | male | 26 | 22 | 4 |
| 6 | Сүхбаатар Цогтоомаа | 42 | Female | 25 | 19 | 6 |
| 7 | Цэцэгмаа Амгалан | 32 | male | 22 | 18 | 4 |
| 8 | Батхүү Уралмаа | 46 | Female | 22 | 11 | 11 |
| 9 | Ганзориг Мунхсайхан | 24 | male | 30 | 20 | 10 |
| 10 | Нугдунмаа Нугдунмаа | 53 | male | 26 | 21 | 5 |
| Others | | | | | | |
| Total | | | | 252 | 180 | 72 |

What was agreed for ID Card

- 2006 Jun 17 (Sat) Am 10:00 to 12:00** is the last chance to take photo.
- NO** photo means no ID card supplied.
- If no ID card is supplied, Those will be deleted from group members.

Sample of ID Card

What was discussed

- Location of Fair Trade Centre
- Maintenance of the new road
- National Registration

Location of Fair Trading Center Building

Schedule for Construction

| | Jun | Jul | Aug | Sep |
|------------------------------|-----|-----|-----|-----|
| Selection of Contractor | ▽ | | | |
| Commencement of Construction | | ▽ | | |
| Completion | | | ▽ | |
| Open for use | | | | ▽ |

Usage of Storage Area①
1: Traders will keep valuables after they buy from you

Who is in charge what?

- Cleaning of the room**
 - Each group will be in charge for a week
 - Each group will contribute some money and hire permanent keeper.
 - Recycle dealer will be in charge
- Wall Warm Stove**
 - Since dealer will be full time in the building, dealer should take care stove.
- Certified Weighing Scale**
 - Maintained by dealers under the control of Nuuts
- Electricity**
 - Nuuts Co. should be responsible

Maintenance of New Road

Rule

- Do not block the traffic on the road
- Do not litter wastes on the road and west of the road.
- Let's Keep clean of your resting place
- Do not go on the truck during moving
→ At least your group member and member's children
- Do not put fire on the waste

Flow of Traffic

Explanation from City Registration Office

Pilot Project for Collection System Improvement

1. Current Collection System

1. This is not a bell collection system. This is a station collection system without container or dust bin, waste was just put on the ground.
2. What is the reason for taken out the container?
3. Are you using chain made SA3206?

Current Collection System

| Type of waste | Frequency | Truck | Fee |
|--|---|-------------------|---|
| Office, Department, Market | Big: 15 times a month Small: 5 times a month | 3 (1DT, 1RR, 1CT) | Max. 200,000Tg Min. 8,000Tg Ave. 95,000Tg |
| Road Cleaning | ? | 2 DT | Dureg Budget |
| Residential Waste from Dust Chute Apartment | 2 times a month | | 200Tg/person |
| Residential Waste from apartment with restaurant and shops | 2 times a day (60 times a month) | 4 (1CT, 3DT) | 200Tg/person No contract? |
| Restaurant and shops | 2 times a day (60 times a month) | | Contract base? Fee? |
| Construction Waste | 1 time a day? | | Contract Base? Fee? |

Category of Waste Collection

- Residential Waste (Apartment with and without dust chute)
- Office, Big business like Department, Market
- Small business like a restaurant, shops
- Road Cleaning
- Construction Wastes

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Problem of Construction Wastes

- Heavy: 1 to 1.2 t/m³
- Take long time for loading
- Cause damage to the truck in case compactor truck is used.

Future collection

| Type of Waste | Type of Truck | Frequency | Separate Collection |
|--|----------------------------------|--------------------------------|---------------------|
| Residential Waste with dust chute | Compactor Truck | | |
| Residential Waste without dust chute | Compactor Truck | | |
| Big Enterprise such as State Department, Post Office, MUB? | Container Truck Roll on Roll out | Contract Base 15 times a month | |
| Small Enterprise, office | Compactor Truck | Contract Base 5 times a month | |
| Road Cleaning | Dump Truck | Contract Base | • |
| Construction Waste | Dump Truck | On demand? | • |

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Next Step

- Set up collection route and point for all the residential waste with and without dust chute
- Estimate the amount of waste to be collected per route per day
- Calculate the required quantities of the truck
- Counter check with Weigh Bridge Record

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Thank You Very Much for Your Attention

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Technical Working Group Meeting (48) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY

Jun 23, 2006
JICA Study Team

1. Work Progress

- Data Collection at WB
- Maintenance of Buffer Zone
- Preparation of Pilot Project for Collection System Improvement
- Construction of Sorting Yard and On-site Road
- Tender for Fair Trade Center at UCDS
- Organization of Waste Pickers
- Follow up interview survey for Public Hearing Meeting no3
- Interview Survey for Business Entities

2. Works for the Following Week

- Data Collection at WB
- Maintenance of Buffer Zone
- Preparation of Pilot Project for Collection System Improvement
- Construction of Fair Trade Centre
- Organization of Waste Pickers
- Registration of Recycling Traders
- Interview Survey for Housing Association
- Interview Survey for Business Entities

3. Subjects to be discussed

- Results of WP meeting no7
- Progress of Pilot Project in UCDS
- PP for Collection System Improvement
- Result of Interview Survey for Chingeltei Resident

Results of WP meeting No 7

Progress of ID Card Registration

| Chairman (Representative) | Age | Gender | ID Card |
|---------------------------|-----|--------|------------|
| 1. Чамсүрэнгийн Ганзориг | 44 | male | 24 |
| 2. Бадмаевын Ганзориг | 40 | Female | 21 |
| 3. Түвшинбаяр Аюушаа Оч | 25 | male | 18 |
| 4. Түвшинбаяр Түвшин | 43 | Female | 24 |
| 5. Сүхбаатарын Тэнгис | 38 | male | 25 |
| 6. Сүхбаатарын Цэвэрлэн | 42 | Female | 29 |
| 7. Цэвэрлэвч Аюушаа | 32 | male | 22 |
| 8. Батбаяр Улаанбаяр | 46 | Female | 23 |
| 9. Ганзориг Мунгал | 24 | male | 25 |
| 10. Түвшинбаяр Түвшинбаяр | 53 | male | 22 |
| Total | | | 225 |

What was discussed

- Handing Over of ID Card
- Maintenance of Fair Trade Centre
- Open New Road
- Stop Fire

Handing Over ID Card

- Now ID card is ready for handing over
- We need signature from each WPs for confirmation of receipt
- How to hand over?
 - From the group leader
 - Group Leader will collect each signature

Fair trade Center

- Construction will start from next week
- Site preparation work will start first.
- Construction Period will be one and half month

Site Preparation for FTC

Site Preparation

Maintenance and Operation of FTC

- Overall Responsibility : Nuuts Co.
- Cleaning : WPs are agree to contribute some money hire people
- Electricity : Nuuts Co.
- Heating : WPs are agree to contribute
- Weighing : Nuuts will employ staff and collect money from Traders?
- Recording : JICA request to record trading quantity

Recycling Traders Meeting on 29 Jun (Thursday)

| No. | Waste Name | Unit | Price | Weight | Quantity |
|-----|----------------|------|-------|--------|----------|
| 1 | Cardboard box | kg | 1000 | 1000 | 1000 |
| 2 | Plastic bottle | kg | 1000 | 1000 | 1000 |
| 3 | Aluminum can | kg | 1000 | 1000 | 1000 |
| 4 | Steel can | kg | 1000 | 1000 | 1000 |
| 5 | Steel can | kg | 1000 | 1000 | 1000 |
| 6 | Steel can | kg | 1000 | 1000 | 1000 |
| 7 | Steel can | kg | 1000 | 1000 | 1000 |
| 8 | Steel can | kg | 1000 | 1000 | 1000 |
| 9 | Steel can | kg | 1000 | 1000 | 1000 |
| 10 | Steel can | kg | 1000 | 1000 | 1000 |
| 11 | Steel can | kg | 1000 | 1000 | 1000 |
| 12 | Steel can | kg | 1000 | 1000 | 1000 |
| 13 | Steel can | kg | 1000 | 1000 | 1000 |
| 14 | Steel can | kg | 1000 | 1000 | 1000 |
| 15 | Steel can | kg | 1000 | 1000 | 1000 |
| 16 | Steel can | kg | 1000 | 1000 | 1000 |
| 17 | Steel can | kg | 1000 | 1000 | 1000 |
| 18 | Steel can | kg | 1000 | 1000 | 1000 |
| 19 | Steel can | kg | 1000 | 1000 | 1000 |
| 20 | Steel can | kg | 1000 | 1000 | 1000 |

Open New Road

Open new road

- When
- How
- How to control traffic (Barricade?)
- Who will control traffic
- How to do after 6 pm when no Nuuts personnel is on site

Stop Fire

Why people put fire?
Is it good for you?
Can you pick more valuables after the fire?
Is it good for your health?
Can you warm during winter?
What can you do to prevent fire?

Progress of Pilot Project in UCDS

- Green Belt

Very small young bud is coming out

Sorting Yard has been completed

Weigh Bridge Repair

Pilot Project for Collection System Improvement

Current Collection System

| Type of waste | Frequency | Truck | Fee |
|--|---|---|---|
| Office, Department, Market | Big 15 times a month Small 8 times a month | 3 (10T, 10Container Truck, 10Container Truck) | 10% 200,000Tg 70% 8,000Tg 12% 95,000Tg |
| Road Cleaning | 2 times a day Big 364,000m2 Small 100,000m2 | 2 DT | Quang Budget |
| Residential Waste from Dual Chule Apartment | 2 times a day (100 times a month) | 4 (10T, 30T) | 20T/gperson |
| Residential Waste from apartment with restaurant and shops | 2 times a day (60 times a month) | | Contract based around 1,000Tg Frequency is not specified |
| Construction Waste | Everyday if there is | | Almost Free |

Future collection

| Type of Waste | Type of Truck | Frequency | Separate Collection |
|--|-----------------|--|---------------------|
| Residential Waste with dual chule | Compactor Truck | 3 times a week including separate collection (2+1) | |
| Residential Waste without dual chule | Compactor Truck | 3 times a week including separate collection (2+1) | |
| Big Enterprise such as State Department, Post, Office, MUB | Container Truck | Contract based 15 times a month | Start from MUB |
| Small Enterprise, office | Compactor Truck | Contract based 8 times a month | * |
| Restaurant and Shop | Compactor Truck | Contract based 2 times a day | ? |
| Road Cleaning | Dump Truck | Contract based | |
| Construction Waste | Dump Truck | On demand or as specified | * |

2 times a day Collection Route and Khoroo No

Result of Interview Survey Households

Purpose of the Survey

- To grasp the behavior of local residents
- To check whether a new collection system and discharge rules are realistic or not

Samples

| Khoroо No. | 1-3 | | 4 | | 5-6 | | Total | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | count | ratio | count | ratio | count | ratio | count | ratio |
| Males | 8 | 80.0% | 3 | 60.0% | 9 | 90.0% | 19 | 86.7% |
| Females | 8 | 40.0% | 2 | 40.0% | 9 | 90.0% | 19 | 43.3% |
| Total | 16 | 100% | 5 | 100% | 18 | 100% | 39 | 100% |

- The interviewees were those who spent time in the public area near their apartment, when we conducted a survey. As a result, they tended to be retirees or housewives.

Q1-1 Near your apartment, are there any problems caused by waste?

| Khoroо No. | 1-3 | | 4 | | 5-6 | | Total | |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|
| | count | ratio | count | ratio | count | ratio | count | ratio |
| yes | 12 | 80.0% | 9 | 100.0% | 8 | 90.0% | 29 | 83.3% |
| no | 3 | 20.0% | 0 | 0.0% | 2 | 20.0% | 5 | 16.7% |
| Total | 15 | 100% | 9 | 100% | 10 | 100% | 34 | 100% |

Q2 How do you think about the condition of your neighborhood in terms of cleanliness and hygiene?

| Khoroо No. | 1-3 | | 4 | | 5-6 | | Total | |
|------------------------|-------|--------|-------|-------|-------|-------|-------|-------|
| | count | ratio | count | ratio | count | ratio | count | ratio |
| It is very bad | 8 | 40.0% | 3 | 60.0% | 2 | 20.0% | 13 | 36.7% |
| It is bad a little bit | 3 | 20.0% | 2 | 40.0% | 2 | 20.0% | 7 | 20.2% |
| It is rather good | 6 | 40.0% | 0 | 0.0% | 6 | 60.0% | 12 | 40.0% |
| It is very good | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Total | 16 | 100.0% | 5 | 100% | 10 | 100% | 31 | 100% |

In Khoroо 5 and 6, there are many dust chube apartment.

Q5-1 How many pieces of plastic bag waste is generated?

| Khoroо No. | 1-3 | | 4 | | 5-6 | | Total | |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | count | ratio | count | ratio | count | ratio | count | ratio |
| 1 small plastic bag | 1 | 47% | 1 | 25% | 8 | 67% | 10 | 47% |
| 1 plastic bag a day | 8 | 34% | 2 | 50% | 0 | 0% | 10 | 34% |
| 2 plastic bags a day | 8 | 34% | 1 | 25% | 0 | 0% | 9 | 41% |
| Total | 16 | 100% | 4 | 100% | 8 | 100% | 28 | 100% |

Q6 How do you store waste at your house?

| Khoroо No. | 1-3 | | 4 | | 5-6 | | Total | |
|---|-------|--------|-------|--------|-------|--------|-------|--------|
| | count | ratio | count | ratio | count | ratio | count | ratio |
| In a metal/plastic container with a plastic bag | 15 | 100.0% | 8 | 100.0% | 10 | 100.0% | 33 | 100.0% |
| Total | 15 | 100.0% | 8 | 100.0% | 10 | 100.0% | 33 | 100.0% |

Q9 How often does your family discharge waste?

| Khoroо No. | 1-3 | | 4 | | 5-6 | | Total | |
|----------------------------------|-------|--------|-------|-------|-------|-------|-------|-------|
| | count | ratio | count | ratio | count | ratio | count | ratio |
| Three times and more twice a day | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| once a day (morning) | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| once a day (afternoon/evening) | 0 | 0.0% | 1 | 25% | 0 | 0.0% | 1 | 3.3% |
| once every second day | 4 | 26.7% | 2 | 50% | 2 | 20% | 8 | 26.7% |
| once every third day | 3 | 18.8% | 0 | 0.0% | 1 | 10% | 4 | 13.3% |
| others | 1 | 6.3% | 0 | 0.0% | 0 | 0.0% | 1 | 3.3% |
| Total | 18 | 100.0% | 3 | 100% | 10 | 100% | 31 | 100% |

It is not an unrealistic request to ask local residents to store their waste for 2 days. It can be said that three-time collection per week is applicable in Khoroо 5 and 6, there is a dust chube system and resident can discharge at any time. So 60 % is discharging everyday.

In Khoroо 1-3, wastes are collected twice a day, but residents are discharging less than once a day.

Q19 If the frequency of the collection service is decreased from twice a day to once a day or less than everyday, how do you think about it?

| Khoroо No. | 1-3 | | 4 | | 5-6 | | Total | |
|---|-------|--------|-------|--------|-------|--------|-------|--------|
| | count | ratio | count | ratio | count | ratio | count | ratio |
| One is not enough. Twice is better | 8 | 80.0% | 1 | 20.0% | 1 | 10.0% | 10 | 36.7% |
| As long as fluid time followed suit is better, 1 time is ok | 3 | 20.0% | 0 | 0.0% | 0 | 0.0% | 3 | 10.0% |
| once a day is ok | 2 | 13.3% | 4 | 80.0% | 9 | 90.0% | 15 | 40.0% |
| once in 2 days | 1 | 6.7% | 0 | 0.0% | 3 | 30.0% | 4 | 13.3% |
| Total | 15 | 100.0% | 5 | 100.0% | 10 | 100.0% | 30 | 100.0% |

In Khoroо 1-3, even though people is discharging less than once a day, 60 % of the people is still requesting more service. People prefer more convenient services. But it is important to realize that a more convenient service is expensive.

MUB has to explain the trade-off between the cost and the level of services and persuade people.

Q15-1 Do you usually separate and sell recyclables such as cans and bottle?

| Khoroо No. | 1-3 | | 4 | | 5-6 | | Total | |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | count | ratio | count | ratio | count | ratio | count | ratio |
| Yes | 3 | 20.0% | 0 | 0.0% | 1 | 10.0% | 4 | 13.3% |
| No | 12 | 80.0% | 0 | 0.0% | 9 | 90.0% | 21 | 66.7% |
| Total | 15 | 100% | 0 | 0% | 10 | 100% | 25 | 100% |

It seems difficult to ask all the residents to start the source separation at once. A priority is given to the improvement of their discharge manner (Waste can be discharged only on the collection day.)

In the beginning, only those who understand the importance of recycling and are willing to separate recyclables join the source separation activity.

It is important for MUB to explain local residents why MUB decide to implement source separation.

Thank You Very Much for Your Attention

Technical Working Group Meeting (49) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY

Jun 30, 2006

JICA Study Team

1. Work Progress

- ① Data Collection at WB
- ② Maintenance of Buffer Zone
- ③ Preparation of Pilot Project for Collection System Improvement
- ④ Construction of Fair Trade Centre
- ⑤ Organization of Waste Pickers
- ⑥ Registration of Recycling Trader
- ⑦ Interview Survey for Housing Association
- ⑧ Interview Survey for Business Entities

2. Works for the Following Week

- ① Data Collection at WB
- ② Maintenance of Buffer Zone
- ③ Preparation of Pilot Project for Collection System Improvement
- ④ Construction of Fair Trade Centre
- ⑤ Organization of Waste Pickers
- ⑥ Registration of Recycling Trader
- ⑦ Interview Survey for Housing Association
- ⑧ Interview Survey for Business Entities

3. Subjects to be discussed

- ① Results of WP meeting No.8
- ② Results of Recycling Trader meeting No.1
- ③ PP for Collection System Improvement
- ④ On going Schedule

Results of WP meeting No 8

Final Results of ID Card Issuance

| Chairman (Representative) | 56 | male | ID Card |
|-------------------------------|----|--------|---------|
| 1. Чамсүрэл Ганзориг | 44 | male | 24 |
| 2. Бадаржав Ганзориг | 40 | Female | 21 |
| 3. Ганзориг Амарсүх | 25 | male | 10 |
| 4. Чувдсүрэнцэцэг Тугантөг | 43 | Female | 24 |
| 5. Сэрэнсүрэн Ган-Сүхбаатар | 28 | male | 25 |
| 6. Сүхбаатар Чувдсүрэнцэцэг | 42 | Female | 24 |
| 7. Чувдсүрэнцэцэг Амарсүх | 32 | male | 22 |
| 8. Батсүрэн Улаансүрэн | 46 | Female | 20 |
| 9. Ганзориг Мунхууд | 24 | male | 22 |
| 10. Чувдсүрэнцэцэг Нугансүрэн | 53 | male | 22 |
| Total | | | 225 |

What was discussed

1. Handing Over of ID Card from Nuuts Dispatcher to Individuals
2. Stop Fire

Handing Over ID Card

- ◆ Handing Over of ID card :
 - From Nuuts Co WB-controller, one by one
- ◆ We need a signature from each WP for confirmation of receipt and Confirmation of following the rule

General Rule for usage of ID Card

- ◆ The ID card issued by the company is your registration as a member of the groups working at the Ulaanchabul Disposal site and the confirmation that you are worker who is separating waste.
- ◆ If you do not possess the national civil registration documents, the company, the MUB and JICA project unit do not object for using the ID card to enter certain organizations and receive medical services. The usage by other purposes is prohibited.
- ◆ Being issued with the ID card will allow you to receive any humanitarian aid coming to the disposal site at the priority service.
- ◆ If you do lose this ID card, you will be penalized by 3000 tugriks and the company will re-issue the ID card, but it will not be issued for more than 3 times.
- ◆ ***NUUTS' Company**

Rule inside Landfill Area -1

1. You have to keep ID Card with you whenever you are working at Disposal Site
2. You can work only at designated place by Nuuts Supervisor (SV)
3. You have to follow instruction of Nuuts SV

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Rule inside Landfill Area -2

1. You can not enter to the place where Bulldozer is pushing wastes
2. Stealing of others is prohibited
3. Riding on top of the collection truck is prohibited

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Stop Fire

Prevention of Fire - 1

1. What is a role of WPs to prevent fire
 - Inform to Nuuts if there is fire
 - Inform to Nuuts if somebody put fire
 - What is the penalty
 - Help to extinguish fire
 - Holding hose of water truck
 - Put soil, ash on fire with shovel provided by Nuuts
 - Carry water with buckets provided by Nuuts

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Prevention of Fire - 2

1. Each group in charge every three days in one month
 - The vest will be provided by Nuuts to identify which group is in charge today.
2. Hot ash have to be disposed separately
3. Who instruct truck driver?
3. Where to dispose?
3. If truck driver does not listen, what to do
 - TUX driver: Take record of truck number and Nuuts report to MUB, MUB will warn TUX, Nuuts will warn private
 - Private:

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Recycle Traders Meeting No.1

List of Recycling Traders

| No. | Trader Name | Address | Phone | Vehicle | Capacity (kg) | Remarks |
|-----|-------------|---------|-------|---------|---------------|---------|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |

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Registration of Recycling Traders

1. Only registered traders are allowed to enter to UCDS disposal site
2. ID card will be issued to the registered traders at the cost of 2,500Tg
3. Fair Trading Center will be constructed and only certified scale shall be used for weighing valuables.
4. There are four storage area will be provided

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Layout of Fair Trading Center

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What needs to be decided

- Schedule for taking photo on 3rd Jul at 12:00
- Conditions to occupy storage
 - There are only 4 storages
 - Traders who occupy storage needs to be appeared every day to purchase from WPs
 - Contribution for heating and electricity.

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Pilot Project for Collection System Improvement

Schedule for Collection Improvement (Collection Side)

| Item | 7 | 8 | 9 | 10 |
|--------------------------------------|------------|---|---|----|
| Discussion with MUB | Atsuo | | | |
| Fix Collection Route, Place and Time | Atsuo | | | |
| Explanation to TUX | Atsuo | | | |
| Installation of Bell | Atsuo | | | |
| Collection Schedule | Atsuo | | | |
| Commencement of Bell Collection | Atsuo | | | |
| (Practice of Fixed Time Collection) | Atsuo | | | |
| Installation of Collection Unit | Atsuo | | | |
| Commencement of Separate Collection | Atsuo | | | |
| Monitoring for Punctual Collection | MUB, Atsuo | | | |

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Collection Schedule Essential for Sorting yard and RDF

| | Mon | Tue | Wed | Thu | Fri | Sat | Sun |
|--------|-----|-----|-----|-----|-----|-----|-----|
| 1:30pm | R | | G | | | G | |
| 2:30pm | G | R | | G | | | |
| 3:30pm | | G | R | | G | | |
| 4:30pm | | G | R | | | G | |
| 5:30pm | G | | | G | R | | |
| 6:30pm | | G | | | G | R | |
| Total | R-1 | R-1 | R-1 | R-1 | R-1 | R-1 | |
| 200kg | G-2 | G-2 | G-2 | G-2 | G-2 | G-2 | |

G: Collection day of General Waste
R: Collection day of Recyclable Waste

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Schedule for Collection Improvement (Discharge Side)

| Item | 7 | 8 | 9 | 10 |
|---|-------|---|---|----|
| Meeting with Housing Association of MUB | Kaito | | | |
| Meeting with Door | Kaito | | | |
| Review of each MUB | Kaito | | | |
| Practical work | Kaito | | | |
| Distribution of leaflet | Kaito | | | |
| Preparation of Notice Board | Atsuo | | | |
| Installing Notice Board at each gate | Atsuo | | | |
| Notice of Commencement of the Separate Collection | Atsuo | | | |
| Education of Separate Discharge at School | Kaito | | | |
| Monitoring and Guiding | Atsuo | | | |
| Separate Discharge at MUB Office | Atsuo | | | |
| Interview Survey for the New Collection Service | Kaito | | | |

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On going Schedule

1. Kono will go back on 8 Jul
2. Mr. Shimura will be in UB on 20 Jul
3. Mr. Doi and Kani will be in UB on 4 Aug
4. Next Weekly Meeting will be on 21st Jul by Mr. Shimura
5. Have a nice Holiday!!

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Thank You Very Much for Your Attention


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Technical Working Group Meeting (50) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY










July 28, 2006
JICA Study Team



















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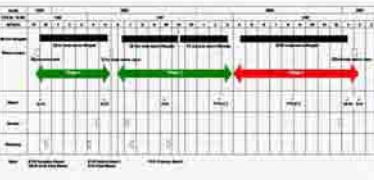
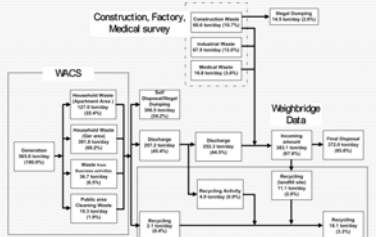
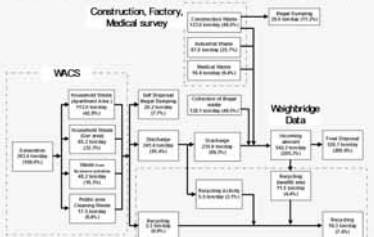
| <h3>1. Work Progress</h3> <ul style="list-style-type: none">■ Data Collection at WB■ Maintenance of Buffer Zone■ Preparation of Pilot Project for Collection System Improvement■ Construction of Fair Trade Centre■ Organization of Waste Pickers■ Registration of Recycling Trader■ Negotiation of Contract for Grassroots Grant Aid for Used Collection Vehicles from Kawasaki City■ Reapplication of Grassroots Grant Aid for Used Collection Vehicles from Sapporo City■ Contract of 24 tons of RDF Production was made■ Interview Survey for Housing Association■ Interview Survey for Business Entities | <h3>2. Works for the Following Week</h3> <ul style="list-style-type: none">■ Preparation of Pilot Project for Collection System Improvement■ Construction of Fair Trade Centre■ Organization of Waste Pickers■ Registration of Recycling Trader■ Preparation of Visit of ODA Committee Member of Japanese Upper House Parliament■ Production of 24tons of RDF■ Analysis of Interview Survey for Housing Association■ Analysis of Interview Survey for Business Entities | <h3>3. Subjects to be discussed</h3> <ul style="list-style-type: none">① Work Progress of Pilot Project for Collection System Improvement② Schedule of ODA Committee Member of Upper House of Japanese Parliament | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|-----------|---------------|---|--|---------------|--------------------------|--------------------------------|---------------|--|--------------------------------|--|---|----|------------------|---------|--------------------|-------|----|-------------------------------|-------|--------------------------------------|-------|--|------------------------------------|-------|---------------------------------|-------|--|-------------------------------|-------|------------------------------------|-------|--|-------------------------------------|-------|-------------------------------|-------|--|-----------------------------------|-------|-------------------------------------|-------|--|------------------------|-------|------------------------------------|------------|--|----------------------------------|-------|--|--|--|---|-------|--|--|--|---|--|------|-------|-----------|---------------|------------------------|--------------|---------------|---|--------------------------------|---------------|-------------------|--------------|
| <h4>① Work Progress of Pilot Project for Collection System Improvement</h4> | <h4>Progress</h4> <ul style="list-style-type: none">◇ Transportation contract for used collection vehicles from Kawasaki City is being made.◇ Several compactor trucks will come by the end of September??? => Mr. Delgerbayar◇ When delivery schedule is fixed, Mr. Doi will modify the schedule.◇ The results of interview survey to housing association (44) and business entities (181) are being analyzed. | <h4>Schedule for Collection Improvement (Collection Side): Before modification</h4> <table><tr><th>Item</th><th>7</th><th>8</th><th>9</th><th>10</th></tr><tr><td>Discussion with MUB</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Fix Collection Route, Sites and Time</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Explanation to TUK</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>House and Market Collection Schedule</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Commissioner of Ball Collection</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Production of Road Time Collection</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Production of Collection Time</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Commissioner of Separate Collection</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Monitoring for Punctual Collection</td><td>MUB, Atsuo</td><td></td><td></td><td></td></tr></table> | Item | 7 | 8 | 9 | 10 | Discussion with MUB | Atsuo | | | | Fix Collection Route, Sites and Time | Atsuo | | | | Explanation to TUK | Atsuo | | | | House and Market Collection Schedule | Atsuo | | | | Commissioner of Ball Collection | Atsuo | | | | Production of Road Time Collection | Atsuo | | | | Production of Collection Time | Atsuo | | | | Commissioner of Separate Collection | Atsuo | | | | Monitoring for Punctual Collection | MUB, Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | |
| Item | 7 | 8 | 9 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discussion with MUB | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fix Collection Route, Sites and Time | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Explanation to TUK | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| House and Market Collection Schedule | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commissioner of Ball Collection | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production of Road Time Collection | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production of Collection Time | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commissioner of Separate Collection | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monitoring for Punctual Collection | MUB, Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <h4>Schedule for Collection Improvement (Discharge Side): Before modification</h4> <table><tr><th>Item</th><th>7</th><th>8</th><th>9</th><th>10</th></tr><tr><td>Meeting with Housing Association (MUB)</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Meeting with Door</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Meeting with TUK</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Production of Ball Collection</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Production of Road Time Collection</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Production of Collection Time</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Commissioner of Separate Collection</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Production of Separate Collection</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Monitoring and Guiding</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Separate Discharge at MUB Office</td><td>Atsuo</td><td></td><td></td><td></td></tr><tr><td>Interview Survey for the New Collection Sites</td><td>Atsuo</td><td></td><td></td><td></td></tr></table> | Item | 7 | 8 | 9 | 10 | Meeting with Housing Association (MUB) | Atsuo | | | | Meeting with Door | Atsuo | | | | Meeting with TUK | Atsuo | | | | Production of Ball Collection | Atsuo | | | | Production of Road Time Collection | Atsuo | | | | Production of Collection Time | Atsuo | | | | Commissioner of Separate Collection | Atsuo | | | | Production of Separate Collection | Atsuo | | | | Monitoring and Guiding | Atsuo | | | | Separate Discharge at MUB Office | Atsuo | | | | Interview Survey for the New Collection Sites | Atsuo | | | | <h4>② Schedule of ODA Committee Member of Upper House of Japanese Parliament:</h4> <p>Date: August 8, 2006</p> <p>AM 10:40: At a meeting room of the Governor's Office of Municipality of Ulaanbaatar (MUB)</p> <p>AM 11:10: Leave MUB for Ulaan Chuluut Disposal Site (UCDS)</p> <p>AM 11:40: Arrive at UCDS</p> <p>AM 12:00: Leave UCDS</p> | <h4>Program at Governor's Office</h4> <table><tr><th>Time</th><th>Topic</th><th>Expositor</th></tr><tr><td>10:40 ~ 10:45</td><td>Opening Address by MUB</td><td>Mayor of MUB</td></tr><tr><td>10:45 ~ 11:00</td><td>Outline of the Study on SWM Plan for Ulaanbaatar City</td><td>Mr. Doi of the JICA Study Team</td></tr><tr><td>11:00 ~ 11:10</td><td>Question & Answer</td><td>Participants</td></tr></table> | Time | Topic | Expositor | 10:40 ~ 10:45 | Opening Address by MUB | Mayor of MUB | 10:45 ~ 11:00 | Outline of the Study on SWM Plan for Ulaanbaatar City | Mr. Doi of the JICA Study Team | 11:00 ~ 11:10 | Question & Answer | Participants |
| Item | 7 | 8 | 9 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Meeting with Housing Association (MUB) | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Meeting with Door | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Meeting with TUK | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production of Ball Collection | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production of Road Time Collection | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production of Collection Time | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commissioner of Separate Collection | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Production of Separate Collection | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monitoring and Guiding | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Separate Discharge at MUB Office | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Interview Survey for the New Collection Sites | Atsuo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Time | Topic | Expositor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:40 ~ 10:45 | Opening Address by MUB | Mayor of MUB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10:45 ~ 11:00 | Outline of the Study on SWM Plan for Ulaanbaatar City | Mr. Doi of the JICA Study Team | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:00 ~ 11:10 | Question & Answer | Participants | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <h4>Program at UCDS</h4> <table><tr><th>Time</th><th>Topic</th><th>Expositor</th></tr><tr><td>11:40 ~ 11:50</td><td>Outline of the Pilot Project for the Improvement of UCDS at Warm Garage</td><td>Mr. Doi of the JICA Study Team</td></tr><tr><td>11:50 ~ 11:55</td><td>Visit of the Waighbridge</td><td>Mr. Doi of the JICA Study Team</td></tr><tr><td>11:55 ~ 12:00</td><td>Observation of UCDS from a top of hill</td><td>Mr. Doi of the JICA Study Team</td></tr></table> | Time | Topic | Expositor | 11:40 ~ 11:50 | Outline of the Pilot Project for the Improvement of UCDS at Warm Garage | Mr. Doi of the JICA Study Team | 11:50 ~ 11:55 | Visit of the Waighbridge | Mr. Doi of the JICA Study Team | 11:55 ~ 12:00 | Observation of UCDS from a top of hill | Mr. Doi of the JICA Study Team | <h4>Discussion Matter (1)</h4> <ol style="list-style-type: none">1. Available time is very limited. So that all explanation to member of parliament (MP) will be done by Mr. Doi in Japanese.2. Presentation => Mr. Doi. If any request, let us know3. Finalization of program in Japanese => Mr. Shimura & Mr. Doi. If any request, let us know4. Screens for presentation at Governor's Office and UCDS => CMPUD & Nuuts5. Chairs for the visitors (in total 14 persons or more) at Warm Garage of UCDS => Nuuts | <h4>Discussion Matter (2)</h4> <ol style="list-style-type: none">6. National flags for Governor's Office and UCDS => CMPUD7. Drawings for Pilot Project for the improvement of UCDS => Mr. Doi8. Others => See table prepared by Mr. Delgerbayar | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Time | Topic | Expositor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:40 ~ 11:50 | Outline of the Pilot Project for the Improvement of UCDS at Warm Garage | Mr. Doi of the JICA Study Team | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:50 ~ 11:55 | Visit of the Waighbridge | Mr. Doi of the JICA Study Team | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11:55 ~ 12:00 | Observation of UCDS from a top of hill | Mr. Doi of the JICA Study Team | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <h3>Thank You Very Much for Your Attention</h3> | <h3>Separate Collection Project</h3> <p>11th Aug, 2006 JICA Study Team</p> | <h3>2 Steps</h3> <ol style="list-style-type: none">1. Establishment of the 3 times a week collection for residential waste<ul style="list-style-type: none">■ Area A: Mon, Wed, Fri■ Area B: Tue, Thu, Sat2. Introduction of the separate collection<ul style="list-style-type: none">■ Once a week■ Mon, Tue, Wed, Thu, Fri or Sat <table><tr><th></th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th></tr><tr><td>Truck 1</td><td>A1</td><td>B1</td><td>A1</td><td>B1</td><td>A1</td><td>B1</td></tr><tr><td>Truck 2</td><td>A1</td><td>B1</td><td>A2</td><td>B2</td><td>A3</td><td>B3</td></tr></table> | | Mon | Tue | Wed | Thu | Fri | Sat | Truck 1 | A1 | B1 | A1 | B1 | A1 | B1 | Truck 2 | A1 | B1 | A2 | B2 | A3 | B3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mon | Tue | Wed | Thu | Fri | Sat | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Truck 1 | A1 | B1 | A1 | B1 | A1 | B1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Truck 2 | A1 | B1 | A2 | B2 | A3 | B3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <h3>1st Step: 3 times a Week Collection</h3> <ol style="list-style-type: none">1. Objective: Elimination of open communal collection points to keep the surroundings clean2. Methods<ul style="list-style-type: none">- No change of the collection route- Introduce this system from the easiest area and later widen the area. | <h3>Decide the project area</h3> | <h3>Collection Day for Garbage</h3> <p>Mon Wed Fri</p> <h3>Collection Day for Recyclables</h3> <p>Tue Thu Sat</p> <p>■ Please discharge waste only on these collection days. Please discharge waste in the morning. ■ Please do not leave the plastic, glass and other flammable materials, which can be transported without any problem, if you do not know the plastic, glass and other flammable materials, please contact the JICA Study Team. ■ Please keep highly flammable waste in a separate container, which can be transported without any problem.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

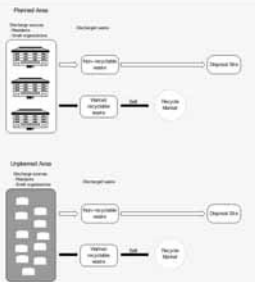
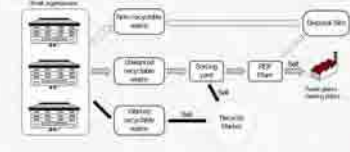

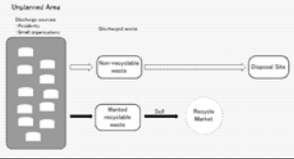

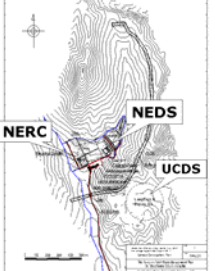
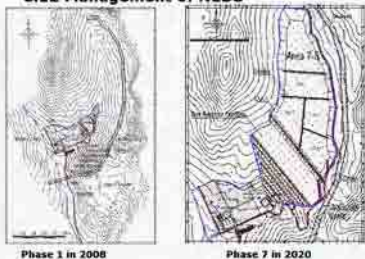





| <div> <div>  </div> <div> <p>■ You can discharge waste only on these collection days. Please discharge waste in the morning. ■ You have to place your bags at a designated place, where your housing association general. ■ If you do not follow the place, color and day your housing association, cleaning person is not helping. ■ Please don't lightly throw waste in order to prevent waste from overflowing.</p> </div> </div> | <div> <h3>Key to Success</h3> <ul style="list-style-type: none"> Establishment of relevant parties' responsibilities Waste dischargers: to discharge waste according to the rule TUK: to collect waste according to the schedule Who is responsible to educate dischargers and to supervise them. </div> | <div> <h3>Result of HA Survey</h3> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|-----------|----------|-------|------------------------------|----------|----------|--------------|----------|-------------------------------|----------|---------|---------|----------|--|----------|---------|---------|----------|----------------------------|-----------------|----------|---------|----------|------------------|----------------------|---------|----------|----------|--------------------------------------|-----------------------|---------|---------|----------|------------------------------|---------|---------|---------|---------|---|----------|---------|---------|----------|---|--|---------|---------|----------|---|---|----------|---------|---------|---------------------------------------|--------|---------|---------|---------|---------|----------|--------|--------|--------|-------|---------|----------|---------|---------|--|----------|---------|---------|---------|---------|--|----------|---------|----------|----------|---|----------|---------|----------|-----------|----------------------------------|------------------|---------|---------|----------|---|---------------------------------|---------|---------|----------|----------|------------------------------|---------|---------|---------|----------|---------------|---------|---------|---------|--|-----------|---------|-----------|---------|---------|-------|----|----|----|----|---|----------|-----|---|-----|-------|----------------|---------|---------|---------|---------|------------------------|---------|---------|---------|----------|--------------------|---------|---------|---------|----------|-----------------|---------|---------|--------|---------|-------|---------|---------|---------|---------|---|---|---|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|----|----|---|----|-----------|---------|-----------|-------|------------------|---|---|---|-----------|----|---|----|-------------|---|---|---|-------|----|----|----|
| <div> <h3>Samples</h3> <h4>Number of Housing Associations by Khoro</h4> <table> <tr> <th>Khoro</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>Total</th></tr> <tr> <td>Number of HA</td><td>8</td><td>7</td><td>8</td><td>10</td><td>4</td><td>7</td><td>44</td></tr> </table> <p>All the housing associations were interviewed from June 26 to July 24.</p> <h4>Current Collection Type</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>door collection</td><td>22 95.7%</td><td>8 60%</td><td>3 27.3%</td><td>31 79.6%</td></tr> <tr> <td>Container collection</td><td>0 0.0%</td><td>2 20.0%</td><td>1 9.1%</td><td>3 8.8%</td></tr> <tr> <td>Dust chute collection</td><td>0 0.0%</td><td>0 0.0%</td><td>6 54.5%</td><td>6 13.6%</td></tr> <tr> <td>No</td><td>1 4.3%</td><td>2 20.0%</td><td>1 9.1%</td><td>4 9.8%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> </div> | Khoro | 1 | 2 | 3 | 4 | 5 | 6 | Total | Number of HA | 8 | 7 | 8 | 10 | 4 | 7 | 44 | Khoro No | 1-3 | 4 | 5-6 | total | door collection | 22 95.7% | 8 60% | 3 27.3% | 31 79.6% | Container collection | 0 0.0% | 2 20.0% | 1 9.1% | 3 8.8% | Dust chute collection | 0 0.0% | 0 0.0% | 6 54.5% | 6 13.6% | No | 1 4.3% | 2 20.0% | 1 9.1% | 4 9.8% | Total | 23 100% | 10 100% | 11 100% | 44 100% | <div> <h4>Number of Apartment Buildings which belong to HA</h4> <table> <tr> <th>Khoro</th><th>1-3</th><th>Khoro 4</th><th>Khoro 5-6</th><th>total</th></tr> <tr> <td>1-10</td><td>3</td><td>7</td><td>5</td><td>15</td></tr> <tr> <td>11-20</td><td>3</td><td>3</td><td>5</td><td>11</td></tr> <tr> <td>21-30</td><td>6</td><td>3</td><td>1</td><td>10</td></tr> <tr> <td>31-40</td><td>6</td><td>1</td><td>1</td><td>8</td></tr> <tr> <td>41-50</td><td>1</td><td>1</td><td>3</td><td>5</td></tr> <tr> <td>Total</td><td>23</td><td>10</td><td>11</td><td>44</td></tr> </table> <h4>Number of Households which belong to HA</h4> <table> <tr> <th>Khoro</th><th>1-3</th><th>Khoro 4</th><th>Khoro 5-6</th><th>total</th></tr> <tr> <td>1-10</td><td>6</td><td>3</td><td>1</td><td>10</td></tr> <tr> <td>11-20</td><td>8</td><td>3</td><td>3</td><td>14</td></tr> <tr> <td>21-30</td><td>5</td><td>1</td><td>2</td><td>8</td></tr> <tr> <td>31-40</td><td>2</td><td>1</td><td>2</td><td>5</td></tr> <tr> <td>41-50</td><td>1</td><td>1</td><td>1</td><td>3</td></tr> <tr> <td>Total</td><td>23</td><td>10</td><td>11</td><td>44</td></tr> </table> </div> | Khoro | 1-3 | Khoro 4 | Khoro 5-6 | total | 1-10 | 3 | 7 | 5 | 15 | 11-20 | 3 | 3 | 5 | 11 | 21-30 | 6 | 3 | 1 | 10 | 31-40 | 6 | 1 | 1 | 8 | 41-50 | 1 | 1 | 3 | 5 | Total | 23 | 10 | 11 | 44 | Khoro | 1-3 | Khoro 4 | Khoro 5-6 | total | 1-10 | 6 | 3 | 1 | 10 | 11-20 | 8 | 3 | 3 | 14 | 21-30 | 5 | 1 | 2 | 8 | 31-40 | 2 | 1 | 2 | 5 | 41-50 | 1 | 1 | 1 | 3 | Total | 23 | 10 | 11 | 44 | <div> <h4>Q2 How do you think about the condition of your neighborhood in terms of cleanliness and hygiene?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>It is very bad</td><td>3 13.0%</td><td>2 20.0%</td><td>2 18.2%</td><td>7 15.9%</td></tr> <tr> <td>It is bad a little bit</td><td>8 34.8%</td><td>3 30.0%</td><td>4 36.4%</td><td>15 34.1%</td></tr> <tr> <td>It is neither good</td><td>8 34.8%</td><td>4 40.0%</td><td>4 36.4%</td><td>16 36.4%</td></tr> <tr> <td>It is very good</td><td>4 17.4%</td><td>1 10.0%</td><td>1 9.1%</td><td>6 13.6%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> </div> | Khoro No | 1-3 | 4 | 5-6 | total | It is very bad | 3 13.0% | 2 20.0% | 2 18.2% | 7 15.9% | It is bad a little bit | 8 34.8% | 3 30.0% | 4 36.4% | 15 34.1% | It is neither good | 8 34.8% | 4 40.0% | 4 36.4% | 16 36.4% | It is very good | 4 17.4% | 1 10.0% | 1 9.1% | 6 13.6% | Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro | 1 | 2 | 3 | 4 | 5 | 6 | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of HA | 8 | 7 | 8 | 10 | 4 | 7 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| door collection | 22 95.7% | 8 60% | 3 27.3% | 31 79.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Container collection | 0 0.0% | 2 20.0% | 1 9.1% | 3 8.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dust chute collection | 0 0.0% | 0 0.0% | 6 54.5% | 6 13.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No | 1 4.3% | 2 20.0% | 1 9.1% | 4 9.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro | 1-3 | Khoro 4 | Khoro 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-10 | 3 | 7 | 5 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11-20 | 3 | 3 | 5 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21-30 | 6 | 3 | 1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31-40 | 6 | 1 | 1 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41-50 | 1 | 1 | 3 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 | 10 | 11 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro | 1-3 | Khoro 4 | Khoro 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-10 | 6 | 3 | 1 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11-20 | 8 | 3 | 3 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21-30 | 5 | 1 | 2 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31-40 | 2 | 1 | 2 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 41-50 | 1 | 1 | 1 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 | 10 | 11 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is very bad | 3 13.0% | 2 20.0% | 2 18.2% | 7 15.9% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is bad a little bit | 8 34.8% | 3 30.0% | 4 36.4% | 15 34.1% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is neither good | 8 34.8% | 4 40.0% | 4 36.4% | 16 36.4% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is very good | 4 17.4% | 1 10.0% | 1 9.1% | 6 13.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div> <h4>Q3-1 Inside the premises of your Housing Association, are there any problem caused improper solid waste management?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>Yes</td><td>17 73.9%</td><td>7 70.0%</td><td>10 90.9%</td><td>34 77.0%</td></tr> <tr> <td>No</td><td>5 21.7%</td><td>3 30.0%</td><td>1 9.1%</td><td>9 20.2%</td></tr> <tr> <td>I do not know</td><td>0 0.0%</td><td>0 0.0%</td><td>0 0.0%</td><td>0 0.0%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>Accidents take their waste inside of</td><td>15 65.2%</td><td>7 70.0%</td><td>7 63.6%</td><td>29 65.9%</td></tr> <tr> <td>There is a waste trap</td><td>4 21.7%</td><td>2 20.0%</td><td>0 0.0%</td><td>6 13.6%</td></tr> <tr> <td>Waste person's waste inside the building to collect waste</td><td>15 65.2%</td><td>5 50.0%</td><td>4 36.4%</td><td>24 54.5%</td></tr> <tr> <td>Waste person's waste inside the building to collect waste</td><td>12 52.2%</td><td>3 30.0%</td><td>7 63.6%</td><td>22 50.0%</td></tr> <tr> <td>Waste in the dust chute inside the building</td><td>1 4.3%</td><td>1 10.0%</td><td>4 36.4%</td><td>6 13.6%</td></tr> <tr> <td>There is a fire inside the dust chute</td><td>0 0.0%</td><td>0 0.0%</td><td>3 27.3%</td><td>3 6.8%</td></tr> <tr> <td>Others</td><td>3 13.0%</td><td>0 0.0%</td><td>0 0.0%</td><td>3 6.8%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> </div> | Khoro No | 1-3 | 4 | 5-6 | total | Yes | 17 73.9% | 7 70.0% | 10 90.9% | 34 77.0% | No | 5 21.7% | 3 30.0% | 1 9.1% | 9 20.2% | I do not know | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | Total | 23 100% | 10 100% | 11 100% | 44 100% | Khoro No | 1-3 | 4 | 5-6 | total | Accidents take their waste inside of | 15 65.2% | 7 70.0% | 7 63.6% | 29 65.9% | There is a waste trap | 4 21.7% | 2 20.0% | 0 0.0% | 6 13.6% | Waste person's waste inside the building to collect waste | 15 65.2% | 5 50.0% | 4 36.4% | 24 54.5% | Waste person's waste inside the building to collect waste | 12 52.2% | 3 30.0% | 7 63.6% | 22 50.0% | Waste in the dust chute inside the building | 1 4.3% | 1 10.0% | 4 36.4% | 6 13.6% | There is a fire inside the dust chute | 0 0.0% | 0 0.0% | 3 27.3% | 3 6.8% | Others | 3 13.0% | 0 0.0% | 0 0.0% | 3 6.8% | Total | 23 100% | 10 100% | 11 100% | 44 100% | <div> <h4>Q 4-1 What kinds of functions does your association have?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>to disseminate information from MUB to members</td><td>19 82.6%</td><td>8 80.0%</td><td>10 90.9%</td><td>37 84.1%</td></tr> <tr> <td>to organize a meeting of members</td><td>19 82.6%</td><td>8 80.0%</td><td>10 90.9%</td><td>37 84.1%</td></tr> <tr> <td>to settle troubles among members</td><td>17 73.9%</td><td>8 80.0%</td><td>11 100%</td><td>36 81.8%</td></tr> <tr> <td>to represent the interest of members and petition to the government</td><td>16 69.6%</td><td>5 50.0%</td><td>9 81.8%</td><td>30 68.2%</td></tr> <tr> <td>Others</td><td>2 8.7%</td><td>3 30.0%</td><td>0 0.0%</td><td>5 11.4%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> </div> | Khoro No | 1-3 | 4 | 5-6 | total | to disseminate information from MUB to members | 19 82.6% | 8 80.0% | 10 90.9% | 37 84.1% | to organize a meeting of members | 19 82.6% | 8 80.0% | 10 90.9% | 37 84.1% | to settle troubles among members | 17 73.9% | 8 80.0% | 11 100% | 36 81.8% | to represent the interest of members and petition to the government | 16 69.6% | 5 50.0% | 9 81.8% | 30 68.2% | Others | 2 8.7% | 3 30.0% | 0 0.0% | 5 11.4% | Total | 23 100% | 10 100% | 11 100% | 44 100% | <div> <h4>Number of Cleaning Person per Each Building</h4> <table> <tr> <th>Khoro 1-3</th><th>Khoro 4</th><th>Khoro 5-6</th><th>total</th></tr> <tr> <td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr> <td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr> <td>2</td><td>2</td><td>0</td><td>2</td></tr> <tr> <td>3</td><td>3</td><td>0</td><td>3</td></tr> <tr> <td>4</td><td>4</td><td>0</td><td>4</td></tr> <tr> <td>5</td><td>5</td><td>0</td><td>5</td></tr> <tr> <td>6</td><td>6</td><td>0</td><td>6</td></tr> <tr> <td>7</td><td>7</td><td>0</td><td>7</td></tr> <tr> <td>8</td><td>8</td><td>0</td><td>8</td></tr> <tr> <td>9</td><td>9</td><td>0</td><td>9</td></tr> <tr> <td>10</td><td>10</td><td>0</td><td>10</td></tr> <tr> <td>11</td><td>11</td><td>0</td><td>11</td></tr> <tr> <td>12</td><td>12</td><td>0</td><td>12</td></tr> <tr> <td>13</td><td>13</td><td>0</td><td>13</td></tr> <tr> <td>14</td><td>14</td><td>0</td><td>14</td></tr> <tr> <td>15</td><td>15</td><td>0</td><td>15</td></tr> <tr> <td>16</td><td>16</td><td>0</td><td>16</td></tr> <tr> <td>17</td><td>17</td><td>0</td><td>17</td></tr> <tr> <td>18</td><td>18</td><td>0</td><td>18</td></tr> <tr> <td>19</td><td>19</td><td>0</td><td>19</td></tr> <tr> <td>20</td><td>20</td><td>0</td><td>20</td></tr> <tr> <td>21</td><td>21</td><td>0</td><td>21</td></tr> <tr> <td>22</td><td>22</td><td>0</td><td>22</td></tr> <tr> <td>23</td><td>23</td><td>0</td><td>23</td></tr> <tr> <td>24</td><td>24</td><td>0</td><td>24</td></tr> <tr> <td>25</td><td>25</td><td>0</td><td>25</td></tr> <tr> <td>26</td><td>26</td><td>0</td><td>26</td></tr> <tr> <td>27</td><td>27</td><td>0</td><td>27</td></tr> <tr> <td>28</td><td>28</td><td>0</td><td>28</td></tr> <tr> <td>29</td><td>29</td><td>0</td><td>29</td></tr> <tr> <td>30</td><td>30</td><td>0</td><td>30</td></tr> <tr> <td>31</td><td>31</td><td>0</td><td>31</td></tr> <tr> <td>32</td><td>32</td><td>0</td><td>32</td></tr> <tr> <td>33</td><td>33</td><td>0</td><td>33</td></tr> <tr> <td>34</td><td>34</td><td>0</td><td>34</td></tr> <tr> <td>35</td><td>35</td><td>0</td><td>35</td></tr> <tr> <td>36</td><td>36</td><td>0</td><td>36</td></tr> <tr> <td>37</td><td>37</td><td>0</td><td>37</td></tr> <tr> <td>38</td><td>38</td><td>0</td><td>38</td></tr> <tr> <td>39</td><td>39</td><td>0</td><td>39</td></tr> <tr> <td>40</td><td>40</td><td>0</td><td>40</td></tr> <tr> <td>41</td><td>41</td><td>0</td><td>41</td></tr> <tr> <td>42</td><td>42</td><td>0</td><td>42</td></tr> <tr> <td>43</td><td>43</td><td>0</td><td>43</td></tr> <tr> <td>44</td><td>44</td><td>0</td><td>44</td></tr> </table> <p>Note: In the case that there are more than 2 cleaners, they usually work in shift. Therefore, the average number of cleaning person per building during the day time might be less than 1.</p> <h4>Working Time of Cleaning Person</h4> <table> <tr> <th>Khoro 1-3</th><th>Khoro 4</th><th>Khoro 5-6</th><th>total</th></tr> <tr> <td>around the clock</td><td>4</td><td>2</td><td>6</td></tr> <tr> <td>half time</td><td>16</td><td>7</td><td>23</td></tr> <tr> <td>for cleaner</td><td>3</td><td>1</td><td>4</td></tr> <tr> <td>Total</td><td>23</td><td>10</td><td>33</td></tr> </table> </div> | Khoro 1-3 | Khoro 4 | Khoro 5-6 | total | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 2 | 3 | 3 | 0 | 3 | 4 | 4 | 0 | 4 | 5 | 5 | 0 | 5 | 6 | 6 | 0 | 6 | 7 | 7 | 0 | 7 | 8 | 8 | 0 | 8 | 9 | 9 | 0 | 9 | 10 | 10 | 0 | 10 | 11 | 11 | 0 | 11 | 12 | 12 | 0 | 12 | 13 | 13 | 0 | 13 | 14 | 14 | 0 | 14 | 15 | 15 | 0 | 15 | 16 | 16 | 0 | 16 | 17 | 17 | 0 | 17 | 18 | 18 | 0 | 18 | 19 | 19 | 0 | 19 | 20 | 20 | 0 | 20 | 21 | 21 | 0 | 21 | 22 | 22 | 0 | 22 | 23 | 23 | 0 | 23 | 24 | 24 | 0 | 24 | 25 | 25 | 0 | 25 | 26 | 26 | 0 | 26 | 27 | 27 | 0 | 27 | 28 | 28 | 0 | 28 | 29 | 29 | 0 | 29 | 30 | 30 | 0 | 30 | 31 | 31 | 0 | 31 | 32 | 32 | 0 | 32 | 33 | 33 | 0 | 33 | 34 | 34 | 0 | 34 | 35 | 35 | 0 | 35 | 36 | 36 | 0 | 36 | 37 | 37 | 0 | 37 | 38 | 38 | 0 | 38 | 39 | 39 | 0 | 39 | 40 | 40 | 0 | 40 | 41 | 41 | 0 | 41 | 42 | 42 | 0 | 42 | 43 | 43 | 0 | 43 | 44 | 44 | 0 | 44 | Khoro 1-3 | Khoro 4 | Khoro 5-6 | total | around the clock | 4 | 2 | 6 | half time | 16 | 7 | 23 | for cleaner | 3 | 1 | 4 | Total | 23 | 10 | 33 |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yes | 17 73.9% | 7 70.0% | 10 90.9% | 34 77.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No | 5 21.7% | 3 30.0% | 1 9.1% | 9 20.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I do not know | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accidents take their waste inside of | 15 65.2% | 7 70.0% | 7 63.6% | 29 65.9% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| There is a waste trap | 4 21.7% | 2 20.0% | 0 0.0% | 6 13.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste person's waste inside the building to collect waste | 15 65.2% | 5 50.0% | 4 36.4% | 24 54.5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste person's waste inside the building to collect waste | 12 52.2% | 3 30.0% | 7 63.6% | 22 50.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste in the dust chute inside the building | 1 4.3% | 1 10.0% | 4 36.4% | 6 13.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| There is a fire inside the dust chute | 0 0.0% | 0 0.0% | 3 27.3% | 3 6.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Others | 3 13.0% | 0 0.0% | 0 0.0% | 3 6.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to disseminate information from MUB to members | 19 82.6% | 8 80.0% | 10 90.9% | 37 84.1% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to organize a meeting of members | 19 82.6% | 8 80.0% | 10 90.9% | 37 84.1% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to settle troubles among members | 17 73.9% | 8 80.0% | 11 100% | 36 81.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to represent the interest of members and petition to the government | 16 69.6% | 5 50.0% | 9 81.8% | 30 68.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Others | 2 8.7% | 3 30.0% | 0 0.0% | 5 11.4% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro 1-3 | Khoro 4 | Khoro 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 41 | 41 | 0 | 41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | 42 | 0 | 42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | 43 | 0 | 43 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | 44 | 0 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro 1-3 | Khoro 4 | Khoro 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| around the clock | 4 | 2 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| half time | 16 | 7 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| for cleaner | 3 | 1 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 | 10 | 33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div> <h4>Q5-1 What's the kinds of works are cleaning person in charge of?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>to clean inside the building</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> <tr> <td>to clean outside the building</td><td>20 87.0%</td><td>10 100%</td><td>11 100%</td><td>41 93.2%</td></tr> <tr> <td>to bring waste to a collection vehicle</td><td>18 78.3%</td><td>8 80.0%</td><td>4 36.4%</td><td>28 63.6%</td></tr> <tr> <td>to clean a discharge point</td><td>6 26.1%</td><td>2 20.0%</td><td>3 27.3%</td><td>11 25.0%</td></tr> <tr> <td>to keep a garden</td><td>15 65.2%</td><td>6 60.0%</td><td>8 72.7%</td><td>29 65.9%</td></tr> <tr> <td>Others</td><td>0 0.0%</td><td>0 0.0%</td><td>0 0.0%</td><td>0 0.0%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> </div> | Khoro No | 1-3 | 4 | 5-6 | total | to clean inside the building | 23 100% | 10 100% | 11 100% | 44 100% | to clean outside the building | 20 87.0% | 10 100% | 11 100% | 41 93.2% | to bring waste to a collection vehicle | 18 78.3% | 8 80.0% | 4 36.4% | 28 63.6% | to clean a discharge point | 6 26.1% | 2 20.0% | 3 27.3% | 11 25.0% | to keep a garden | 15 65.2% | 6 60.0% | 8 72.7% | 29 65.9% | Others | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | Total | 23 100% | 10 100% | 11 100% | 44 100% | <div> <h4>Q 7-1 Are there any spaces to keep waste without worrying that waste is scavenged by waste pickers until a collection vehicle comes to pick them up?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>Yes</td><td>6 26.1%</td><td>0 0.0%</td><td>0 0.0%</td><td>6 13.6%</td></tr> <tr> <td>No</td><td>17 73.9%</td><td>10 100%</td><td>11 100%</td><td>38 86.4%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> <p>Note: Even though all the HA in Khoro 5 & 6 replied that there was no space, the waste storage room of the dust chute can be used as a storage place.</p> <h4>Q 8-1 Can a keeper or cleaning person support collection worker to load waste?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>Yes</td><td>19 82.6%</td><td>8 80.0%</td><td>9 81.8%</td><td>36 81.8%</td></tr> <tr> <td>No</td><td>4 17.4%</td><td>2 20.0%</td><td>2 18.2%</td><td>8 18.2%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> </div> | Khoro No | 1-3 | 4 | 5-6 | total | Yes | 6 26.1% | 0 0.0% | 0 0.0% | 6 13.6% | No | 17 73.9% | 10 100% | 11 100% | 38 86.4% | Total | 23 100% | 10 100% | 11 100% | 44 100% | Khoro No | 1-3 | 4 | 5-6 | total | Yes | 19 82.6% | 8 80.0% | 9 81.8% | 36 81.8% | No | 4 17.4% | 2 20.0% | 2 18.2% | 8 18.2% | Total | 23 100% | 10 100% | 11 100% | 44 100% | <div> <h4>Q 9-1 How do you think about the plan of the new collection system MUB/JICA study team proposed?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>It is applicable</td><td>8 34.8%</td><td>3 30.0%</td><td>9 81.8%</td><td>20 45.5%</td></tr> <tr> <td>It is applicable to some extent</td><td>7 30.4%</td><td>2 20.0%</td><td>1 9.1%</td><td>10 22.7%</td></tr> <tr> <td>It is difficult to implement</td><td>7 30.4%</td><td>5 50.0%</td><td>1 9.1%</td><td>13 29.6%</td></tr> <tr> <td>I do not know</td><td>1 4.3%</td><td>0 0.0%</td><td>0 0.0%</td><td>1 2.3%</td></tr> <tr> <td>Total</td><td>23 100%</td><td>10 100%</td><td>11 100%</td><td>44 100%</td></tr> </table> </div> | Khoro No | 1-3 | 4 | 5-6 | total | It is applicable | 8 34.8% | 3 30.0% | 9 81.8% | 20 45.5% | It is applicable to some extent | 7 30.4% | 2 20.0% | 1 9.1% | 10 22.7% | It is difficult to implement | 7 30.4% | 5 50.0% | 1 9.1% | 13 29.6% | I do not know | 1 4.3% | 0 0.0% | 0 0.0% | 1 2.3% | Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to clean inside the building | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to clean outside the building | 20 87.0% | 10 100% | 11 100% | 41 93.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to bring waste to a collection vehicle | 18 78.3% | 8 80.0% | 4 36.4% | 28 63.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to clean a discharge point | 6 26.1% | 2 20.0% | 3 27.3% | 11 25.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| to keep a garden | 15 65.2% | 6 60.0% | 8 72.7% | 29 65.9% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Others | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yes | 6 26.1% | 0 0.0% | 0 0.0% | 6 13.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No | 17 73.9% | 10 100% | 11 100% | 38 86.4% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yes | 19 82.6% | 8 80.0% | 9 81.8% | 36 81.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No | 4 17.4% | 2 20.0% | 2 18.2% | 8 18.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is applicable | 8 34.8% | 3 30.0% | 9 81.8% | 20 45.5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is applicable to some extent | 7 30.4% | 2 20.0% | 1 9.1% | 10 22.7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is difficult to implement | 7 30.4% | 5 50.0% | 1 9.1% | 13 29.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I do not know | 1 4.3% | 0 0.0% | 0 0.0% | 1 2.3% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 23 100% | 10 100% | 11 100% | 44 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div> <h3>Result of the Questions to Cleaners</h3> <h4>Q 11-1 Do you think that you will be able to support collection workers to load waste?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>Yes</td><td>5 83.3%</td><td>4 100.0%</td><td>3 100.0%</td><td>12 92.3%</td></tr> <tr> <td>No</td><td>1 16.7%</td><td>0 0.0%</td><td>0 0.0%</td><td>1 7.7%</td></tr> <tr> <td>Total</td><td>6 100%</td><td>4 100%</td><td>3 100%</td><td>13 100%</td></tr> </table> <h4>Q 11-2 How do you think about the above mentioned modification plan?</h4> <table> <tr> <th>Khoro No</th><th>1-3</th><th>4</th><th>5-6</th><th>total</th></tr> <tr> <td>It is applicable</td><td>2 33.3%</td><td>2 50.0%</td><td>3 100.0%</td><td>7 53.8%</td></tr> <tr> <td>It is applicable to some extent</td><td>2 33.3%</td><td>1 25.0%</td><td>0 0.0%</td><td>3 23.1%</td></tr> <tr> <td>It is difficult to implement</td><td>2 33.3%</td><td>0 0.0%</td><td>0 0.0%</td><td>2 15.4%</td></tr> <tr> <td>I do not know</td><td>0 0.0%</td><td>1 25.0%</td><td>0 0.0%</td><td>1 7.7%</td></tr> <tr> <td>Total</td><td>6 100%</td><td>4 100%</td><td>3 100%</td><td>13 100%</td></tr> </table> </div> | Khoro No | 1-3 | 4 | 5-6 | total | Yes | 5 83.3% | 4 100.0% | 3 100.0% | 12 92.3% | No | 1 16.7% | 0 0.0% | 0 0.0% | 1 7.7% | Total | 6 100% | 4 100% | 3 100% | 13 100% | Khoro No | 1-3 | 4 | 5-6 | total | It is applicable | 2 33.3% | 2 50.0% | 3 100.0% | 7 53.8% | It is applicable to some extent | 2 33.3% | 1 25.0% | 0 0.0% | 3 23.1% | It is difficult to implement | 2 33.3% | 0 0.0% | 0 0.0% | 2 15.4% | I do not know | 0 0.0% | 1 25.0% | 0 0.0% | 1 7.7% | Total | 6 100% | 4 100% | 3 100% | 13 100% | <div> <h3>Schedule of Education Program for Households and Small Shops</h3> <p>Pilot Project of Collection Improvement</p> </div> | <div> <h3>Tentative Schedule</h3> <table> <tr> <th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th><th>20</th></tr> <tr> <td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td></tr> <tr> <td>28</td><td>29</td><td>30</td><td>31</td><td>1</td><td>2</td><td>3</td></tr> <tr> <td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr> </table> <p>■ To finalize a area where a trial starts ■ To discuss with HA about discharge points and monitoring measures ■ To prepare for educational materials ■ To organize community meetings</p> </div> | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yes | 5 83.3% | 4 100.0% | 3 100.0% | 12 92.3% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No | 1 16.7% | 0 0.0% | 0 0.0% | 1 7.7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 6 100% | 4 100% | 3 100% | 13 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khoro No | 1-3 | 4 | 5-6 | total | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is applicable | 2 33.3% | 2 50.0% | 3 100.0% | 7 53.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is applicable to some extent | 2 33.3% | 1 25.0% | 0 0.0% | 3 23.1% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| It is difficult to implement | 2 33.3% | 0 0.0% | 0 0.0% | 2 15.4% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I do not know | 0 0.0% | 1 25.0% | 0 0.0% | 1 7.7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 6 100% | 4 100% | 3 100% | 13 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | 29 | 30 | 31 | 1 | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div> <h3>Technical Group Meeting on 18 Aug 2006</h3> <p>JICA Study Team</p> </div> | <div> <h3>Japanese ODA Monitoring Mission's Visit</h3> <p>Date: 21 Aug. Monday</p> <p>Schedule</p> <p>9:40-10:15 Briefing at MUB Welcome speech by General manager Briefing the project by Mr. Doi Q&A by Mr. Deigerbayar</p> <p>10:45-11:30 Disposal site visit Hill top Weighbridge</p> </div> | <div> <h3>Purpose of The Mission</h3> <ul style="list-style-type: none"> Participants <ul style="list-style-type: none"> 5 common Japanese citizens selected 1 Famous actress, she has been also UNDP friendship ambassador since 1998. TV staff and media: about 15 They visit various projects in Mongolia for a week to evaluate the Japanese ODA projects from tax payer's point of view. Ulaanchulte site has been selected. </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |


















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| <p>Request</p> <ul style="list-style-type: none">• TV staff may interview waste pickers.• TV staff may take picture and video of waste pickers.• In advance, I will tell TV staff to take pictures after getting approval from waste pickers.• If they do so, please cooperate | <p>Mrs. Misako Konno</p> <div><ul style="list-style-type: none">• Age: about 45</div> | <p>UNDP Ambassador's Activities</p> <div></div> | | | | | | | | |
| <p>Collection Improvement</p> | <p>Progress</p> <ul style="list-style-type: none">• The project site was decided.<ul style="list-style-type: none">– Behind Nomin department.– Near MUB building• A truck with speaker and amplifier installed started waste collection with playing the melody in the project site.• The team with a TUK staff visited all housing associations in the project site to explain the project. | <div></div> | | | | | | | | |
| <div></div> | <div></div> | <div></div> | | | | | | | | |
| <div></div> | <div></div> | <div></div> | | | | | | | | |
| <p>The present condition of waste collection in the project area.</p> <ul style="list-style-type: none">• The collection truck is 2 ton truck.• It goes around the area twice a day.• It goes to the disposal site only once a day.• In the site, many 1m3 communal containers were used. Majority of people in the site appreciate the present system without communal containers.• Now they want to eliminate waste heaps. | <p>Benefits by Melody</p> <ul style="list-style-type: none">• It informs people its arrival.• It proves that TUK collected waste.• It informs people that they should not discharge waste after this until the next collection day.• The friendly melody improves the dirty image of the waste collection work. It encourage people to cooperate the collection work. | <p>My Impression to the Present Collection Method</p> <ul style="list-style-type: none">• Very low collection efficiency. Only 1 trip daily. It should make at least 2 trips.• Parking at a collection point for too long time.<ul style="list-style-type: none">– It causes low work efficiency.– It disturbs people by playing melody.– Proper discharge shorten the parking time and improve the work efficiency.• We will give the training to drivers and collection workers. | | | | | | | | |
| <p>Starting Area</p> <div></div> | <p>Data of the Starting Area</p> <table><tr><td>Targeted Khoroo</td><td>1, 3, & 4</td></tr><tr><td>Targeted Housing Associations</td><td>8</td></tr><tr><td>Targeted Apartment</td><td>22</td></tr><tr><td>Targeted Households</td><td></td></tr></table> | Targeted Khoroo | 1, 3, & 4 | Targeted Housing Associations | 8 | Targeted Apartment | 22 | Targeted Households | | <p>Discharge Rules</p> <p>Day</p> <ul style="list-style-type: none">■ People can discharge waste only on the collection day<ul style="list-style-type: none">□ Collection Day<ul style="list-style-type: none">• Area A: Monday, Wednesday, and Friday• Area B: Tuesday, Thursday, Saturday <p>Time</p> <ul style="list-style-type: none">■ People can discharge waste only during the designated time.<ul style="list-style-type: none">□ There are two patterns:<ul style="list-style-type: none">• If someone is at home when a collection vehicle comes: to discharge waste when a collection vehicle sounds a song• If nobody is at home during the collection time, they place waste in the morning of the collection at a designated place |
| Targeted Khoroo | 1, 3, & 4 | | | | | | | | | |
| Targeted Housing Associations | 8 | | | | | | | | | |
| Targeted Apartment | 22 | | | | | | | | | |
| Targeted Households | | | | | | | | | | |

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|--|--|--|----------------|---|--|-----------------|---|-----------------------|--------------|---|---|-----------------|---|----------------|----------------|---|---|
| <p>Discharge Rules</p> <p>Place</p> <ul style="list-style-type: none"> People bring waste directly to a collection vehicle or people can discharge waste only at a designated place. The discharge place is decided by each Housing Association <p>The discharge place should be:</p> <ul style="list-style-type: none"> To have enough space for storing waste from households To keep waste pickers from scattering waste <p>Ways of discharging waste</p> <ul style="list-style-type: none"> People have to discharge in the following way. <ul style="list-style-type: none"> To discharge waste in a plastic bag (Don't dump waste directly on the ground.) To bind tightly a plastic bag | <p>Community Meetings</p> | <p>Purpose</p> <ul style="list-style-type: none"> To make a consensus with local residents (to explain why discharge rules are necessary) To make residents understand the modified collection system and new discharge rules | | | | | | | | | | | | | | | |
| <p>Outline of Meeting</p> <p>There are three meetings on August 26 and 27.</p> <p>Program</p> <table border="1"> <tr> <td>1</td><td>Opening remarks</td><td>Khoro Governor</td></tr> <tr> <td>2</td><td>Introduction <ul style="list-style-type: none"> Background Purpose of discharge rules Examples of other countries </td><td>JICA Study Team</td></tr> <tr> <td>3</td><td>New Collection System</td><td>TUK director</td></tr> <tr> <td>4</td><td>Explanation of discharge rules <ul style="list-style-type: none"> Proposed discharge rules Instructions on how to store and discharge waste </td><td>JICA Study Team</td></tr> <tr> <td>5</td><td>Closing Remark</td><td>Khoro Governor</td></tr> </table> | 1 | Opening remarks | Khoro Governor | 2 | Introduction <ul style="list-style-type: none"> Background Purpose of discharge rules Examples of other countries | JICA Study Team | 3 | New Collection System | TUK director | 4 | Explanation of discharge rules <ul style="list-style-type: none"> Proposed discharge rules Instructions on how to store and discharge waste | JICA Study Team | 5 | Closing Remark | Khoro Governor | <p>Introduction of Discharge Rules</p> <p>Pilot Project: Improvement of Collection System</p> <p>Let's help clean our Khoros!</p> | <p>Background of Pilot Project</p> <p>Why we need discharge rules?</p> |
| 1 | Opening remarks | Khoro Governor | | | | | | | | | | | | | | | |
| 2 | Introduction <ul style="list-style-type: none"> Background Purpose of discharge rules Examples of other countries | JICA Study Team | | | | | | | | | | | | | | | |
| 3 | New Collection System | TUK director | | | | | | | | | | | | | | | |
| 4 | Explanation of discharge rules <ul style="list-style-type: none"> Proposed discharge rules Instructions on how to store and discharge waste | JICA Study Team | | | | | | | | | | | | | | | |
| 5 | Closing Remark | Khoro Governor | | | | | | | | | | | | | | | |
| <p>Current Conditions of Chingeltei District</p> <ul style="list-style-type: none"> There are a lot of waste heaps Waste is scattered across the area Waste heaps cause odor problem There are too many flies <p>Waste heaps are cause of the last three problems</p> | <p>Chingeltei District (last year)</p>  <p>Under the Container Collection System</p> | <p>Current Chingeltei District</p>  | | | | | | | | | | | | | | | |
| <p>Current Collection System</p>  <p>This is not a "Bell Collection" at all!</p> | <p>Bell Collection System</p>  <p>in Sri Lanka</p> | <p>How waste heaps are created?</p>  | | | | | | | | | | | | | | | |
| <p>How to prevent waste heaps?</p> <p>A period of time between discharging and collecting waste have to be controlled within a certain interval of time.</p> <p>↓</p> <ul style="list-style-type: none"> The schedule of collection service is fixed. (TUK is responsible) Residents discharge waste according to the collection schedule. (You are responsible) | <p>In order to achieve these 2 things, discharge rules are most effective tools.</p> <p>Therefore...</p> <p>We need discharge rules in order to keep our areas Clean!</p> | <p>Discharge Rules in Japan</p> | | | | | | | | | | | | | | | |
| <p>Collection System in Urban Tokyo</p> <p>Communal Collection System</p> <ul style="list-style-type: none"> Common discharge points are prepared along the street where a collection vehicle passes. A Signboard is installed at every discharge point  | <p>Discharge Points in Tokyo</p>  <p>On the street</p>  <p>Apartment complex</p> | <p>Instruction on how to discharge combustible waste</p>  <p>A leaflet distributed to all the households in Setagaya-ku (Tokyo)</p> | | | | | | | | | | | | | | | |









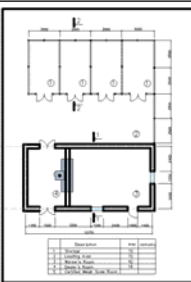




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| <p>A Discharge Day in Tokyo at 8:00 a.m.</p>  | <p>A Discharge Day in Tokyo at 8:00 a.m.</p>  <p>Apartment complex</p> | <p>Collection Work in Tokyo</p>  |
| <p>Procedure to introduce discharge rules</p> | <p>Procedures (Before start of new collection system)</p> <ul style="list-style-type: none"> ■ Baseline surveys (housing association, households, and business) ■ Consensus building (mainly with housing association) +Khoroo government ■ Formulation of draft of discharge rules, while discussing with housing associations and Khoroo/MUB ■ Preparation of educational materials ■ Organizing community meetings <ul style="list-style-type: none"> □ Kick-off meeting (first) □ Community meeting (second) □ Additional meeting (if necessary) | <p>Procedures (After start of new collection system)</p> <ul style="list-style-type: none"> ■ Monitoring (by person appointed by housing association) ■ Modification of discharge rules ■ Preparation of additional educational materials ■ Monitoring (in some areas monitoring person are replaced with other person) ■ Monitoring by authority and Identifying violators and penalizing them (not yet) |
| <p>Tentative Result</p> <p>It varies due to</p> <ul style="list-style-type: none"> ■ the conditions of the areas ■ Housing associations |  | <p>Area 1</p> <ul style="list-style-type: none"> ■ Result is not good ■ One of the most difficult areas in Chingeltei <ul style="list-style-type: none"> □ Apartment buildings are facing busy street (a lot of outsiders) □ Mixed with business □ A lot of low income households ■ Residents know new rules but not follow them. Strict monitoring by authority is necessary. Charging fine to some violators might have a considerable impact on residents' behavior |
| <p>Before</p>  <p>after</p>  <p>8/29 11:50 a.m. 8/31 9:00 a.m. 9/1 9:00 a.m.</p> | <p>Area 2</p> <ul style="list-style-type: none"> ■ Result is very good ■ Housing association works very hard ■ Majority of residents discharge waste properly (only small number of residents still dump waste as they did before) ■ Cleaning person take their own measures to make loading work easier | <p>Before</p>  <p>after</p>  <p>8/31 9:00 a.m.</p>  <p>8/29 11:50 a.m. 8/31 9:00 a.m. 9/1 9:00 a.m.</p> |
| <p>There are still some minor problems</p>  | <p>Area 4</p> <ul style="list-style-type: none"> ■ Result is not good ■ There are a lot of business (in particular restaurants) and offices which still use the former dumping place <ul style="list-style-type: none"> □ TUK is now supervising business ■ Some residents still dump waste at the former dumping place ■ Strict monitoring is necessary. (now TUK is in charge of monitoring) | <p>8/31</p>  <p>Business waste!</p>  <p>9/1</p>  <p>Household waste!</p>  |
| <p>Area 5 & 6</p> <ul style="list-style-type: none"> ■ Result is good ■ The apartment is isolated from outside areas and it is easy for keeper and cleaning person to control waste discharge ■ Residents understand rules well | <p>Area 5</p> <p>8/29</p>  <p>Just outside the gate, there is a waste heap as it was before. The discharge manner of residents was good.</p> <p>8/31</p>  | <p>Area 6</p> <p>8/29</p>  <p>Some residents discharge waste on the day without collection service. As long as waste is kept inside the premises, it is acceptable.</p> <p>On the day of collection service, a keeper prepare a big plastic bag for keeping waste</p>  |









| <h3>Tentative Conclusions</h3> <ul style="list-style-type: none">■ Residential area with limited number of business<ul style="list-style-type: none">□ It is not difficult to introduce discharge rules■ Residential area mixed with business and open to busy street<ul style="list-style-type: none">□ If housing association is not active, it is difficult to implement rules.□ More involvement of government organization (strict monitoring and law enforcement) is indispensable. | <h3>Cambodian cases</h3> <ul style="list-style-type: none">• Discharge rules were implemented smoothly in the resident area mixed with business• Monitoring by Sangkat officers (relevant organization to Khoroo) and staff of Department of Environment (Municipality of Phnom Penh) and giving instruction to violators contributed to the successful result. | <h3>Japanese cases (Setagaya)</h3> <p>Continuous effort by local governments</p> <ul style="list-style-type: none">■ To raise people's awareness on solid waste management.■ To enforce law by strict monitoring <div><p>Notice of survey on waste discharge situations</p><p>We will conduct a survey on waste discharge situations for a while. Please classify waste properly and discharge it on the day of collection day by 8:00 a.m.</p><p>If you find waste which is not discharged properly, we will check inside in order to identify the dischargers. We might visit the houses of these dischargers.</p><p>We will appreciate your understanding and cooperation.</p></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|-----------------------|-----------------------|-------------------------------------|---|--|---|---|--|------|------|---------------|------|------|------|------|---------|------------|------|-----|------|----------------|-----|------------------------|------|-----|---------|------|------|-------------------|------|--------------------|------|------|-----|--------------------------|------------------------|-------|------|------|------|--------------|------|-------|------|------|------------------|---------------|------|-------|------|-------------------|-----|------------------------|------|-----|---------------|------|-----|---------------------------|------|----------------------------|------|------|------|---|--|-------|-------|-------|-------|
| <h3>Technical Working Group Meeting (56)</h3> <p>for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</p> <p>Sep 15, 2006 JICA Study Team</p> | <h3>Contents of the Presentation</h3> <p>A) Outline of the Study B) Field investigations to identify current solid waste management (SWM) in Ulaanbaatar city (UBC) C) Master plan (M/P) and Feasibility study (F/S) D) Pilot projects (PP) to examine practicability of the M/P</p> | <h3>A.1 Outline of the Study: Objectives</h3> <ul style="list-style-type: none">□ To formulate a master plan (Target Year 2020) of SWM in Ulaanbaatar City and conduct a Feasibility Study for the priority projects proposed in the Master Plan.□ To enhance the institutional, organizational, and human capacity related to solid waste management in Ulaanbaatar City | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <h3>A.2 Study Area:</h3> <p>Area; 3,944km². Population; 843,016</p>  | <h3>A.3 Study Schedule (1)</h3> <ul style="list-style-type: none">□ The Study on Solid Waste Management Plan for Ulaanbaatar City in Mongolia is being conducted from November 2004 and will end February 2007. The Study consists of the following three phases and implemented as shown in the next screen. <ol style="list-style-type: none">1. Phase 1: Formulation of the Master Plan (M/P) - from November 2004 till May 20052. Phase 2: Feasibility Study for Priority Projects and Implementation of Pilot Projects - from June 2005 till March 20063. Phase 3: Monitoring and follow-up of the projects and programs to be proposed in the Study - from April 2006 till February 2007 | <h3>A.4 Study Schedule (2)</h3>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <h3>B.1 Field Investigations</h3> <ul style="list-style-type: none">□ The following field investigations were conducted to fully understand the present SWM conditions in the study area: <ol style="list-style-type: none">1. Waste amount and composition survey (WACS)2. Time and motion survey (T&M survey)3. Public opinion survey (POS)4. Environmental survey on the conditions around final disposal sites5. Opinion survey on medical institutions6. Factory survey7. Survey on recycling market | <h3>B.2 Waste Characteristics in UBC</h3> <ul style="list-style-type: none">□ Few portion of kitchen waste => 34.2%□ Few portion of compostable wastes (kitchen+ grass/wood) => 37.0%□ Large portion of high calorific wastes (paper + plastic) => 36.1%□ Ger area : Large portion of Ash => 82.9% (winter season) | <h3>B.3 Current and future waste composition – Without Ash</h3> <table><tr><th>Category of MSW</th><th>2005</th><th>2010</th><th>2015</th><th>2020</th></tr><tr><td>Kitchen Waste</td><td>34.2</td><td>34.9</td><td>36.0</td><td>37.3</td></tr><tr><td>Paper</td><td>17.4</td><td>17.9</td><td>18.4</td><td>19.1</td></tr><tr><td>Textile</td><td>4.4</td><td>4.1</td><td>3.7</td><td>3.1</td></tr><tr><td>Grass and Wood</td><td>2.8</td><td>2.5</td><td>1.9</td><td>1.3</td></tr><tr><td>Plastic</td><td>18.6</td><td>19.0</td><td>19.6</td><td>20.3</td></tr><tr><td>Leather and Rubber</td><td>0.5</td><td>0.5</td><td>0.5</td><td>0.4</td></tr><tr><td>Combustibles Sub-Total</td><td>77.9</td><td>78.8</td><td>80.1</td><td>81.5</td></tr><tr><td>Metal</td><td>3.0</td><td>3.1</td><td>3.2</td><td>3.3</td></tr><tr><td>Bottle and Glass</td><td>11.0</td><td>10.9</td><td>11.2</td><td>11.5</td></tr><tr><td>Ceramic and Stone</td><td>5.3</td><td>4.7</td><td>3.6</td><td>2.4</td></tr><tr><td>Miscellaneous</td><td>2.8</td><td>2.5</td><td>1.9</td><td>1.3</td></tr><tr><td>Non-combustibles Sub-Total</td><td>22.1</td><td>21.2</td><td>19.9</td><td>18.5</td></tr><tr><td>Total</td><td>100.0</td><td>100.0</td><td>100.0</td><td>100.0</td></tr></table> | Category of MSW | 2005 | 2010 | 2015 | 2020 | Kitchen Waste | 34.2 | 34.9 | 36.0 | 37.3 | Paper | 17.4 | 17.9 | 18.4 | 19.1 | Textile | 4.4 | 4.1 | 3.7 | 3.1 | Grass and Wood | 2.8 | 2.5 | 1.9 | 1.3 | Plastic | 18.6 | 19.0 | 19.6 | 20.3 | Leather and Rubber | 0.5 | 0.5 | 0.5 | 0.4 | Combustibles Sub-Total | 77.9 | 78.8 | 80.1 | 81.5 | Metal | 3.0 | 3.1 | 3.2 | 3.3 | Bottle and Glass | 11.0 | 10.9 | 11.2 | 11.5 | Ceramic and Stone | 5.3 | 4.7 | 3.6 | 2.4 | Miscellaneous | 2.8 | 2.5 | 1.9 | 1.3 | Non-combustibles Sub-Total | 22.1 | 21.2 | 19.9 | 18.5 | Total | 100.0 | 100.0 | 100.0 | 100.0 |
| Category of MSW | 2005 | 2010 | 2015 | 2020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kitchen Waste | 34.2 | 34.9 | 36.0 | 37.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paper | 17.4 | 17.9 | 18.4 | 19.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Textile | 4.4 | 4.1 | 3.7 | 3.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grass and Wood | 2.8 | 2.5 | 1.9 | 1.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plastic | 18.6 | 19.0 | 19.6 | 20.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leather and Rubber | 0.5 | 0.5 | 0.5 | 0.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Combustibles Sub-Total | 77.9 | 78.8 | 80.1 | 81.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metal | 3.0 | 3.1 | 3.2 | 3.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bottle and Glass | 11.0 | 10.9 | 11.2 | 11.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ceramic and Stone | 5.3 | 4.7 | 3.6 | 2.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Miscellaneous | 2.8 | 2.5 | 1.9 | 1.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-combustibles Sub-Total | 22.1 | 21.2 | 19.9 | 18.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <h3>B.4 Comparison of waste composition</h3> <table><tr><th>Country/City</th><th>Year</th><th>GDP per Capita (US\$)</th><th>Kitchen Waste (%)</th><th>Papers + Plastics (%)</th><th>Metal, Bottle and Glass (%)</th></tr><tr><td>Tokyo in Japan</td><td>1994</td><td>31,961</td><td>25.1</td><td>50.9</td><td>11.9</td></tr><tr><td>Vientiane Lao</td><td>1991</td><td>290</td><td>35.1</td><td>16.3</td><td>8.9</td></tr><tr><td>Phnom Penh</td><td>2003</td><td>268</td><td>63.5</td><td>21.9</td><td>1.9</td></tr><tr><td>Dar es Salaam Tanzania</td><td>1996</td><td>280</td><td>45.0</td><td>6.1</td><td>4.6</td></tr><tr><td>Asuncion Paraguay</td><td>1994</td><td>1,450</td><td>37.4</td><td>14.4</td><td>4.8</td></tr><tr><td>Metro Manila Philippines</td><td>1997</td><td>1,040</td><td>45.4</td><td>32.4</td><td>8.6</td></tr><tr><td>Adana Turkey</td><td>1999</td><td>3,090</td><td>64.4</td><td>20.3</td><td>4.5</td></tr><tr><td>Mexico Mexico</td><td>1998</td><td>5,080</td><td>38.7</td><td>34.6</td><td>NA</td></tr><tr><td>Ulaanbaatar with Ash*1</td><td>2005</td><td>552</td><td>16.4</td><td>16.9</td><td>8.2</td></tr><tr><td>Ulaanbaatar without Ash*1</td><td>2005</td><td>552</td><td>32.6</td><td>33.5</td><td>16.1</td></tr></table> <p>*1: All year in study area</p> | Country/City | Year | GDP per Capita (US\$) | Kitchen Waste (%) | Papers + Plastics (%) | Metal, Bottle and Glass (%) | Tokyo in Japan | 1994 | 31,961 | 25.1 | 50.9 | 11.9 | Vientiane Lao | 1991 | 290 | 35.1 | 16.3 | 8.9 | Phnom Penh | 2003 | 268 | 63.5 | 21.9 | 1.9 | Dar es Salaam Tanzania | 1996 | 280 | 45.0 | 6.1 | 4.6 | Asuncion Paraguay | 1994 | 1,450 | 37.4 | 14.4 | 4.8 | Metro Manila Philippines | 1997 | 1,040 | 45.4 | 32.4 | 8.6 | Adana Turkey | 1999 | 3,090 | 64.4 | 20.3 | 4.5 | Mexico Mexico | 1998 | 5,080 | 38.7 | 34.6 | NA | Ulaanbaatar with Ash*1 | 2005 | 552 | 16.4 | 16.9 | 8.2 | Ulaanbaatar without Ash*1 | 2005 | 552 | 32.6 | 33.5 | 16.1 | <h3>B.5 Waste Flow (Winter) in 2006</h3>  | <h3>B.6 Waste Flow (Summer) in 2006</h3>  | | | | |
| Country/City | Year | GDP per Capita (US\$) | Kitchen Waste (%) | Papers + Plastics (%) | Metal, Bottle and Glass (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tokyo in Japan | 1994 | 31,961 | 25.1 | 50.9 | 11.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vientiane Lao | 1991 | 290 | 35.1 | 16.3 | 8.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Phnom Penh | 2003 | 268 | 63.5 | 21.9 | 1.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dar es Salaam Tanzania | 1996 | 280 | 45.0 | 6.1 | 4.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asuncion Paraguay | 1994 | 1,450 | 37.4 | 14.4 | 4.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metro Manila Philippines | 1997 | 1,040 | 45.4 | 32.4 | 8.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adana Turkey | 1999 | 3,090 | 64.4 | 20.3 | 4.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mexico Mexico | 1998 | 5,080 | 38.7 | 34.6 | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulaanbaatar with Ash*1 | 2005 | 552 | 16.4 | 16.9 | 8.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulaanbaatar without Ash*1 | 2005 | 552 | 32.6 | 33.5 | 16.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <h3>C.1 Goal and Policy of the M/P</h3> <p>The goal of the M/P for SWM in MUB is: "To establish an environmentally sound SWM system in MUB by 2020".</p> <p>The Policy of the M/P is:</p> <ul style="list-style-type: none">□ To provide collection service to all population including Ger area.□ To conduct sanitary landfill operation to minimize negative effects on environment.□ To reuse and recycle generated wastes as a resource as much as possible in order to reduce the amount of the solid waste to be disposed of at the landfills. | <h3>C.2 Priority Projects for the Feasibility (1) Study => For financial assistant</h3> <ol style="list-style-type: none">1. Improvement of collection system including development of a central workshop2. Development of Narangiin Enger Disposal Site (NEDS)3. Development of Narangiin Enger Recycling Complex (NERC) <p>!!! JICA will provide a grant aid to support implementation of the above projects except NERC and send a Basic Design Team for it. !!!</p> | <h3>C.3 Priority Projects for the Feasibility Study (2)</h3> <table><tr><th>Priority Project</th><th>Contents</th></tr><tr><td>1. Improvement of collection system</td><td><ol style="list-style-type: none">1. Improvement of collection efficiency in the Planned area (Apartment area)2. Provision of a collection service to all the households in UB, including the Unplanned area (Ger area)3. Introduction of a separate collection system in the Planned area4. Construction and management of a central workshop</td></tr><tr><td>2. Development of Narangiin Enger Disposal Site (NEDS)</td><td><ol style="list-style-type: none">1. Construction of a final disposal site for sanitary landfill operation2. Implementation of a sanitary landfill operation</td></tr><tr><td>3. Development of Narangiin Enger Recycling Complex</td><td><ol style="list-style-type: none">1. Construction and operation of a sorting yard2. Construction and operation of a RDF plant3. Development of a industrial site for private recycling businesses and attraction of them</td></tr></table> | Priority Project | Contents | 1. Improvement of collection system | <ol style="list-style-type: none">1. Improvement of collection efficiency in the Planned area (Apartment area)2. Provision of a collection service to all the households in UB, including the Unplanned area (Ger area)3. Introduction of a separate collection system in the Planned area4. Construction and management of a central workshop | 2. Development of Narangiin Enger Disposal Site (NEDS) | <ol style="list-style-type: none">1. Construction of a final disposal site for sanitary landfill operation2. Implementation of a sanitary landfill operation | 3. Development of Narangiin Enger Recycling Complex | <ol style="list-style-type: none">1. Construction and operation of a sorting yard2. Construction and operation of a RDF plant3. Development of a industrial site for private recycling businesses and attraction of them | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Priority Project | Contents | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. Improvement of collection system | <ol style="list-style-type: none">1. Improvement of collection efficiency in the Planned area (Apartment area)2. Provision of a collection service to all the households in UB, including the Unplanned area (Ger area)3. Introduction of a separate collection system in the Planned area4. Construction and management of a central workshop | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 3. Development of Narangiin Enger Recycling Complex | <ol style="list-style-type: none">1. Construction and operation of a sorting yard2. Construction and operation of a RDF plant3. Development of a industrial site for private recycling businesses and attraction of them | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| <p>C.4 FS.1 Improvement of collection system including development of a central workshop</p> | <p>C.5 Present</p> <p>Apartment Area:</p> <ul style="list-style-type: none"> *86% fee collection rate and 100% waste collection rate *Poor collection efficiency due to mainly dump trucks & lack of public cooperation *Mixed collection <p>Ger Area:</p> <ul style="list-style-type: none"> *Less than 50 % waste collection and less than 20% fee collection rate *Higher collection cost & fee than the Apartment area *Mixed collection  | <p>C.6 Plan (1): Planned (Apartment) Area</p> <ul style="list-style-type: none"> *Improvement of efficiency by compactor truck collection, etc. => Surplus money shall be used for Ger area collection and introduction of separate collection *Separate collection of Recyclable and Non-recyclable wastes  |
| <p>C.7 Plan (2): Planned (Apartment) Area</p>  | <p>C.8 Plan (3): Unplanned (Ger) Area</p> <ul style="list-style-type: none"> *Provision of collection service to 100% population. *Fee collection rate shall be raised from 18 % to 63 % in 2020. Collection fee shall be the same as the Apartment area. *The poor can request an exemption of fee payment on condition that they participate in city cleaning activities.  | <p>C.9 FS.2 Development of Narangiin Enger Disposal Site (NEDS)</p> |
| <p>C.10 Location of NEDS and NERC</p>  | <p>C.11 Development Plan of NEDS and NERC</p>  | <p>C.12 Management of NEDS</p>  |
| <p>C.13 FS.3 Development of Narangiin Enger Recycling Complex (NERC)</p> | <p>C.14 Plan of NERC (1) :</p> <p>Sanitary landfill operation needs to prohibit WPs activities => Need to provide them a job by sorting yard for separated recyclable wastes</p>  | <p>C.15 Plan of NERC (2) :</p>  |
| <p>C.16 Plan of NERC (3) :</p> <p>Need to solve Non-salable plastic/paper wastes of which proportion in planned area is more than 35%. => RDF production after sorting => RDF production is not profitable in financial aspect due to cost for separate collection and production, low coal price, etc. => MUB/Nuuts can not give any financial profits to the people. => Needs of voluntary efforts by people</p>  | <p>C.17 Necessary Measures for MUB to Implement Proposed Projects</p> <ul style="list-style-type: none"> □ Set up an appropriate waste fund and waste collection fee system that functions a cross-subsidy system □ Strengthen the CMPUD and Nuuts Co., the main organization for the implementation of the plan □ Conduct public relation activities to obtain public cooperation on SWM, especially waste discharge manner | <p>D.1 Pilot Projects (PPs) conducted in Phase 2</p> <ul style="list-style-type: none"> □ The following PPs were conducted: PP.1 Urgent improvement of Ulaan Chuluut disposal site (UCDS) PP.2 Thermal recycling "RDF" PP.3 Movable recyclable collection system "Chirigami Kokan", swapping recyclable for toilet paper PP.4 Examination of the loading device for heavy waste PP.5 Raising public consciousness on waste issues |
| <p>D.2 PP.1:Urgent improvement of UCDS: Objectives</p> <ol style="list-style-type: none"> 1. To establish a control and management system of collected waste in order to avoid illegal dumping; i.e. to dispose of all collected wastes at UCDS; 2. To dispose of the wastes to be hauled at the designated area of the UCDS, that is the first step of the sanitary landfill operation; and 3. To rehabilitate completed landfill area of the UCDS and conduct a sanitary landfill operation as much as possible. | <p>D.3 Urgent improvement of UCDS</p>  | <p>D.4 1. Establishment of boundary of the UCDS by installation of a gate/fences, enclosing bank and signboards</p>  |





| <p>D.5 2. Construction of enclosing dam to establish waste disposal operation area (working face)</p>  | <p>D.6 3. Improvement of on-site road</p>  | <p>D.7 4. Cleaning wastes dumped along access road and surround areas</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|----------------|-----------|-----------|----------------|-----------|-------|-------|---|---|-----|---|-----|-----|-------|-------|-------|--------|-----|----|-----|------|-----|----|-----|-------------|-----|----|-----|
| <p>D.8 5. Installation of gas removal facilities</p>  | <p>D.9 6. Construction of storm water drain</p>  | <p>D.10 7. Installation of leachate treatment facility</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>D.11 8. Installation of a weigh bridge and construction of control building => All wastes disposed of at the disposal site are input into the database</p>  | <p>D.12 9. Construction of warm garage</p>  | <p>D.13 10. Rehabilitation of completed landfill area by re-shaping, slope trimming of the completed landfill surface and soil covering</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>D.14 11. Special waste pit</p>  | <p>D.15 12. Movable fence</p>  | <p>D.16 13. Plan and conduct of waste disposal plan</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>D.17 14. Conduct of waste compaction and leveling</p>  | <p>D.18 15. Conduct of soil covering</p>  | <p>D.19 16. Control of waste picking activities: Registration Number of registered families: 148</p> <table border="1"> <thead> <tr> <th>Duureg</th> <th>Bayangol</th> <th>Bayanzurh</th> <th>Songinohairhan</th> <th>Suhbaatar</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Total</td> <td>2</td> <td>3</td> <td>140</td> <td>3</td> <td>148</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Sex</th> <th>Adult</th> <th>Child</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Female</td> <td>139</td> <td>17</td> <td>156</td> </tr> <tr> <td>Male</td> <td>137</td> <td>36</td> <td>173</td> </tr> <tr> <td>Grand Total</td> <td>276</td> <td>53</td> <td>329</td> </tr> </tbody> </table> | Duureg | Bayangol | Bayanzurh | Songinohairhan | Suhbaatar | Total | Total | 2 | 3 | 140 | 3 | 148 | Sex | Adult | Child | Total | Female | 139 | 17 | 156 | Male | 137 | 36 | 173 | Grand Total | 276 | 53 | 329 |
| Duureg | Bayangol | Bayanzurh | Songinohairhan | Suhbaatar | Total | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 2 | 3 | 140 | 3 | 148 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sex | Adult | Child | Total | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Female | 139 | 17 | 156 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Male | 137 | 36 | 173 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grand Total | 276 | 53 | 329 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>D.20 17. Stop expansion of Ger area to the UCDS</p>  | <p>D.21 18. Establishment of a monitoring committee of disposal sites and conduct of periodical monitoring The monitoring committee meetings were held three times.</p>  | <p>D.22 PP.2 Thermal recycling "RDF (Refuse Derived Fuel)"</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| <p>D.23 Why we will examine possibility of RDF production from waste?</p> <p>There are a lot of papers and plastics wastes which can not be recycled and those wastes cause many problems to landfill operation such as waste scattering and creation of unstable land due to difficulty of compaction and decomposition.</p> | <p>D.24 Plastic Waste Problems at UCDS</p> | <p>D.25 RDF Production in UBC</p> |
| <p>D.26 Mixed combustion test (1): Feeding of RDF (1)</p> <p>RDF Receptor</p> <p>Mix proportion of RDF to coal is decided at 2 % and 4 % in weight (4% and 8 % in terms of calorific value) in this test.</p> <p>RDF Chute</p> <p>The combustion test was conducted at Nishish Heating Plant.</p> | <p>D.27 Feeding of RDF (2)</p> <p>RDF Receptor and Chute</p> <p>RDF Feeding by Manual</p> | <p>D.28 Measurement of Emission Gas</p> <p>Sampling Hole made at Exit of Boiler</p> <p>The detailed information on the test results is available.</p> <p>Sampling of Dust & Dioxins</p> |
| <p>D.29 Results of the First Mixed Combustion Test</p> <p><input type="checkbox"/> Emission gas data</p> <p>1. There is no significant change between pure coal combustion and RDF mixed one on emission gas regarding Dust, HCl, SO₂, NO_x.</p> <p>2. The mixed combustion increases concentration of dioxins, the emission gas data of mixed combustion is far less than the limit values of Japanese and EU standard regarding dioxins of waste incinerator.</p> <p><input type="checkbox"/> Mixed combustion of RDF with coal reduces coal consumption according to the JICA study team estimation.</p> <p>1. 100% coal = 15.3 tons/hour</p> <p>2. 2% RDF (0.24 tons/hour) + coal (10.6 tons/hour)</p> <p>3. 4% RDF (0.48 tons/hour) + coal (8.4 tons/hour)</p> | <p>D.30 PP.3 "Chirigami Kokan" PP</p> <p>It is concluded the system is not financially feasible due to the existence of many Buy Shops if we consider car rent & fuel cost.</p> | <p>D.31 PP.4 Examination of the loading device for heavy waste</p> <p>Purpose of PP is to find a simple practical system of loading heavy waste in the Ger area onto the carrier</p> |
| <p>D.32 PP.5 Raising public consciousness on waste issues (1)</p> <p>The PP has two main objectives:</p> <p><input type="checkbox"/> To make sure of proper operation of the disposal site by introducing the participatory monitoring system</p> <p><input type="checkbox"/> To decrease illegal dumping though public participation</p> | <p>D.33 PP.5 Raising public consciousness on waste issues (2): Activities</p> <p><input type="checkbox"/> Participatory Monitoring System</p> <p><input type="checkbox"/> Establishment of Monitoring Committee for UCDS/PP</p> <p>2. Participatory Evaluation of UCDS/PP</p> <p>3. Public Awareness Activities</p> <p><input type="checkbox"/> Campaign to Stop Illegal Dumping</p> <p><input type="checkbox"/> Establishment of Working Group</p> <p><input type="checkbox"/> Organization of Community Meetings</p> <p><input type="checkbox"/> Preparation of Education and Campaign Material</p> <p><input type="checkbox"/> Cleanup Activities</p> | <p>D.34 Monitoring Committee and Tour</p> |
| <p>D.35 PPs for Phase 3 Study: Expansion of the Pilot Projects: 3Rs Promotion Project</p> <p>Harvest Area</p> <p>Discharge rules</p> <p>Non-recyclable waste</p> <p>Universal waste</p> <p>Sorting and</p> <p>Recycling Market</p> <p>Waste incineration</p> <p>Discharge rules</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> <p>Disposal Site</p> <p>Landfill</p> 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| <div>D.41 Discharge Method</div> <div></div> | <div>D.42 Public Education in Khoroo 3 Chingeltei</div> <div></div> | <div>D.43 Khoroo 4 in Chingeltei</div> <div><div>Before</div><div>Present</div><div></div><div></div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>D.44 Khoroo 3 in Chingeltei</div> <div><div>In 2005</div><div>Present</div><div></div><div></div></div> | <div>D.45 3Rs Promotion Project at UCDS</div> <div><div>1. Organization of waste pickers (WPs)</div><div>2. Construction and operation of a sorting yard and a fair trading center</div><div>3. Construction of a greenbelt</div></div> | <div>D.46 1. Organization of waste pickers (WPs)</div> <div><div>1. Grouping WPs: 10 groups</div><div>2. Issuing ID to WPs: 223 persons (more than 16 years old)</div><div>3. Establishment of 10 fire fighting groups of WPs with unified vests => 3days/month/group x 10</div><div>4. Establishment of WPs' Fund for mutual insurance => 100 Tg/day/person</div></div> <div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>D.47 2. Construction of a sorting yard and a fair trading center</div> <div></div> | <div>D. 48 Fair Trade Center</div> <div><div>1. Overall Responsibility : Nuuts Co.</div><div>2. Cleaning : WPs are agree to contribute some money hire people</div><div>3. Electricity : Nuuts Co.</div><div>4. Heating : WPs are agree to contribute</div><div>5. Weighing : Nuuts will employ staff and collect money from Traders?</div></div> <div></div> | <div>D.49 Construction of a Greenbelt</div> <div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Thank you very much for your attention</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Technical Working Group Meeting (57)</div> <div>for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</div> <div>Sep 29, 2006</div> <div>JICA Study Team</div> | <div>Waste Collection Improvement "Entrance Collection System"</div> | <div>Many Scattered Waste</div> <div></div> <div><div><input type="checkbox"/> Many scattered waste and waste heaps in town.</div><div><input type="checkbox"/> Because people improperly discharge waste anytime.</div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Improvement Method</div> <div>Present Collection System</div> <div><table><tr><td>Homes</td><td>Mon</td><td>Tue</td><td>Wed</td><td>Thu</td><td>Fri</td><td>Sat</td><td>Sun</td></tr><tr><td>Discharge points</td><td colspan="7">Waste Discharge</td></tr><tr><td></td><td colspan="7">Collection and Transportation</td></tr><tr><td></td><td colspan="7">Disposal Site</td></tr></table></div> <div>New Entrance Collection System</div> <div><table><tr><td>Homes</td><td>Mon</td><td>Tue</td><td>Wed</td><td>Thu</td><td>Fri</td><td>Sat</td><td>Sun</td></tr><tr><td>Entrances</td><td colspan="7">Waste Discharge</td></tr><tr><td></td><td colspan="7">Collection and Transportation</td></tr><tr><td></td><td colspan="7">Disposal Site</td></tr></table></div> | Homes | Mon | Tue | Wed | Thu | Fri | Sat | Sun | Discharge points | Waste Discharge | | | | | | | | Collection and Transportation | | | | | | | | Disposal Site | | | | | | | Homes | Mon | Tue | Wed | Thu | Fri | Sat | Sun | Entrances | Waste Discharge | | | | | | | | Collection and Transportation | | | | | | | | Disposal Site | | | | | | | <div>Notice of Waste Collection Days</div> <div></div> | <div>Discharge Method</div> <div></div> |
| Homes | Mon | Tue | Wed | Thu | Fri | Sat | Sun | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Discharge points | Waste Discharge | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Collection and Transportation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Disposal Site | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Homes | Mon | Tue | Wed | Thu | Fri | Sat | Sun | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Entrances | Waste Discharge | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Collection and Transportation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Disposal Site | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| <p>Public Education in Khoroo 3 Chingeltei</p>  | <p>Khoroo 4 in Chingeltei</p> <p>Before</p>  <p>Present</p>  | <p>Khoroo 3 in Chingeltei</p> <p>In 2005</p>  <p>Present</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|------------|----------------------|-----------------------|------------|-----------|--------------|-----|-------|-------|---|---|---------|---|-----|-------|---|---------|---|---|-------|-------|---|---------|--|---|-------|-------|---|--|---------|---|-----|-------|---|---------|--|---|-------|-------|---|--|---------|-------|-------|--------|--|---------|---------|-------------------------|--|--|--|----------------------|-----------------------|--|--|--|--|------------------|-----------------|---|---|
| <p>Pilot Project Collection Improvement and Separate Collection</p> | <p>Area Type of Waste Collection Schedule</p> <table><tr><th>Area Type</th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th><th>Sun</th></tr><tr><td>A</td><td>○</td><td></td><td>○</td><td></td><td>○</td><td></td><td></td></tr><tr><td>B</td><td></td><td>○</td><td></td><td>○</td><td></td><td>○</td><td></td></tr></table> | Area Type | Mon | Tue | Wed | Thu | Fri | Sat | Sun | A | ○ | | ○ | | ○ | | | B | | ○ | | ○ | | ○ | | <p>Area Types of Waste Collection Schedules</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Area Type | Mon | Tue | Wed | Thu | Fri | Sat | Sun | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | ○ | | ○ | | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | | ○ | | ○ | | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Residential Waste Amount in Chingeltei</p> <table><tr><th rowspan="2">Khoroo</th><th rowspan="2">Household No.</th><th rowspan="2">Population</th><th rowspan="2">Area Type</th><th colspan="2">Waste Amount</th></tr><tr><th>A</th><th>B</th></tr><tr><td>1</td><td>1,049</td><td>3,488</td><td>B</td><td></td><td>0.9 t/d</td></tr><tr><td>2</td><td>754</td><td>2,758</td><td>A</td><td>0.7 t/d</td><td></td></tr><tr><td>3</td><td>1,028</td><td>3,724</td><td>A</td><td>1.0 t/d</td><td></td></tr><tr><td>4</td><td>1,014</td><td>4,255</td><td>B</td><td></td><td>1.1 t/d</td></tr><tr><td>5</td><td>954</td><td>3,816</td><td>A</td><td>1.0 t/d</td><td></td></tr><tr><td>6</td><td>1,168</td><td>4,430</td><td>B</td><td></td><td>1.2 t/d</td></tr><tr><td>Total</td><td>5,967</td><td>22,471</td><td></td><td>2.7 t/d</td><td>3.2 t/d</td></tr><tr><td colspan="4">Waste Collection Amount</td><td>Wed. Fri 5.4 t/2d</td><td>Thu. Sat. 6.4 t/2d</td></tr><tr><td colspan="4"></td><td>Mon. 8.2 t/3d</td><td>Tue 9.6 t/3d</td></tr></table> <p>Capacity of the 8 m3 compactor is 2.90 ton per trip.</p> | Khoroo | Household No. | Population | Area Type | Waste Amount | | A | B | 1 | 1,049 | 3,488 | B | | 0.9 t/d | 2 | 754 | 2,758 | A | 0.7 t/d | | 3 | 1,028 | 3,724 | A | 1.0 t/d | | 4 | 1,014 | 4,255 | B | | 1.1 t/d | 5 | 954 | 3,816 | A | 1.0 t/d | | 6 | 1,168 | 4,430 | B | | 1.2 t/d | Total | 5,967 | 22,471 | | 2.7 t/d | 3.2 t/d | Waste Collection Amount | | | | Wed. Fri 5.4 t/2d | Thu. Sat. 6.4 t/2d | | | | | Mon. 8.2 t/3d | Tue 9.6 t/3d | <p>Progress of Collection Improvement</p>  | <p>Problems of Collection Improvement Project</p> <ol style="list-style-type: none">Waste pickers entered the entrance to scavenge waste. Many of them know the entrance code numbers.Most people understood the rule quickly by leaflets. But some of people don't follow the rule. Strategic education is necessary to change their attitude.<ul style="list-style-type: none">Education at schoolCampaign initiated by MUB, Duureg, KhorooPunishment |
| Khoroo | | | | | Household No. | Population | Area Type | Waste Amount | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | A | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1,049 | 3,488 | B | | 0.9 t/d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 754 | 2,758 | A | 0.7 t/d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 1,028 | 3,724 | A | 1.0 t/d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 1,014 | 4,255 | B | | 1.1 t/d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 954 | 3,816 | A | 1.0 t/d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 1,168 | 4,430 | B | | 1.2 t/d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 5,967 | 22,471 | | 2.7 t/d | 3.2 t/d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Waste Collection Amount | | | | Wed. Fri 5.4 t/2d | Thu. Sat. 6.4 t/2d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Mon. 8.2 t/3d | Tue 9.6 t/3d | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Planning of Introduction of Separate Collection</p> <p>■ The original plan has to be changed by the following reasons.</p> <ul style="list-style-type: none">■ The remained project period has got very short due to the delay of the arrival of used compactors from Japan.■ Current District's assistance to the collection improvement project is very limited.■ Necessity of separate collection for RDF production will be unnecessary. | <p>Discuss on the Separate Collection Project</p> <p>Because this is one of the conditions stipulated in the M/M of Basic Design, MUB should consider seriously the followings.</p> <ol style="list-style-type: none">1. Project target area.2. Definition of waste types for recyclable waste.3. Who bears the cost for recyclable waste collection.4. Who do the public education, monitoring, supervision. | <p>Proposal</p> <ol style="list-style-type: none">1. Project target area.<ul style="list-style-type: none">■ One of khoroo in Chingeltei. In this case, the recyclable waste is collected only one trip per week.2. Definition of waste types for recyclable waste.<ul style="list-style-type: none">■ Only recyclables to be collected at the sorting yard.■ Above plus material for RDF3. Who bears the cost for recyclable waste collection.<ul style="list-style-type: none">■ Please decide it.4. Who do the public education, monitoring, supervision.<ul style="list-style-type: none">■ Please decide it and assign them. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Thank you very much for your attention</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Technical Working Group Meeting (58) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</p> <p>Oct 13, 2006 JICA Study Team</p> | <p>RDF Production and 2nd Mixed Combustion Test of RDF with Coal</p> | <p>Production of RDF</p>  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| <p>Completion of RDF Production on 14 October 2006</p> <p>Production Amount : 24,000 kg</p> <p>One bag = 30 kg, 800 bags</p> | <p>Schedule for RDF Combustion Test (tentative)</p> <ul style="list-style-type: none">14 Oct: Transportation of RDF16 Oct: Preliminary test17 Oct: Combustion test (100 % Coal)18-19 Oct: Combustion test (RDF 2% Mixture)20-21 Oct: Combustion test (RDF 4% Mixture) | <p>Emission gas Items for Measurement</p> <ul style="list-style-type: none">(1) Volume(2) Temperature(3) Moisture Content(4) Dust Concentration(5) Oxygen (O2)(6) Carbon Dioxide (CO2)(7) Carbon Monoxide (CO)(8) Sulfur Dioxide (SO2)(9) Nitrogen Oxide (NOx)(10)Dioxins | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|-----------|--------|-----------|---------|-----------|----|----|--|-----|-----|-----|-----|-----|-----|-----|-----------|--|--|-----------|--------|--------|---------|-----------|---|--|--------|--|--------|--|--------|--|-----------------------|--|--|--|--|--|--|--|--------------------------------------|--|--|-----------|-----|-----------|--|--|-----------------------------|--|--|--|--|--|--|--|------------------------------|--|--|--|--|--|--|--|--|
| <p>Other Items</p> <p>Physical Composition of RDF and Coal</p> <ul style="list-style-type: none">Calorific valueThree components <p>Physical Composition of Ash</p> <ul style="list-style-type: none">Three components | <p>Work schedule</p> <table><tr><th>October</th><th>15</th><th>17</th><th>18</th><th>19</th><th>20</th><th>21</th><th>22</th></tr><tr><th></th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th><th>Sun</th></tr><tr><td>Operation</td><td></td><td></td><td>100% Coal</td><td>RDF 2%</td><td>RDF 4%</td><td>RDF 10%</td><td>100% Coal</td></tr><tr><td>Measurement of Emission gas (excludes Dioxin)</td><td></td><td>Test 1</td><td></td><td>Test 2</td><td></td><td>Test 3</td><td></td></tr><tr><td>Measurement of Dioxin</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Physical composition of RDF and coal</td><td></td><td></td><td>RDF, coal</td><td>RDF</td><td>RDF, coal</td><td></td><td></td></tr><tr><td>Physical composition of Ash</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Collection of Operation data</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> | October | 15 | 17 | 18 | 19 | 20 | 21 | 22 | | Mon | Tue | Wed | Thu | Fri | Sat | Sun | Operation | | | 100% Coal | RDF 2% | RDF 4% | RDF 10% | 100% Coal | Measurement of Emission gas (excludes Dioxin) | | Test 1 | | Test 2 | | Test 3 | | Measurement of Dioxin | | | | | | | | Physical composition of RDF and coal | | | RDF, coal | RDF | RDF, coal | | | Physical composition of Ash | | | | | | | | Collection of Operation data | | | | | | | | <p>Progress of Collection Improvement Pilot Project</p> |
| October | 15 | 17 | 18 | 19 | 20 | 21 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mon | Tue | Wed | Thu | Fri | Sat | Sun | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operation | | | 100% Coal | RDF 2% | RDF 4% | RDF 10% | 100% Coal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement of Emission gas (excludes Dioxin) | | Test 1 | | Test 2 | | Test 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement of Dioxin | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Physical composition of RDF and coal | | | RDF, coal | RDF | RDF, coal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Physical composition of Ash | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Collection of Operation data | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Present Situations (1)</p> <ul style="list-style-type: none">Khoroo 1 (main part)<ul style="list-style-type: none">To start preparation work in the beginning of SeptemberFacing problems of making consensus with housing associationsStill in preparationKhoroo2<ul style="list-style-type: none">To start preparation work on Monday of this weekTo reach agreement with most of the housing associationsTo start the new collection system next Monday | <p>Present Situations (2)</p> <ul style="list-style-type: none">Khoroo 3 (+3 buildings in Khoroo 1 and 1 building in Khoroo 4)<ul style="list-style-type: none">To start preparation work in the middle of AugustTo start the new collection system at the end of August (half of the Khoroo)To start the new collection system in the rest of the Khoroo in the middle of September | <p>Evaluation of the new system Index</p> <ul style="list-style-type: none">Change in the number of waste heapsChange in the size of waste heapsResult of interview survey (twice)<ul style="list-style-type: none">Interview survey 1 month after the start of the new systemInterview survey at the end of the project | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Technical Working Group Meeting (59) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</p> <p>Oct 28, 2006 JICA Study Team</p> | <p>Agenda</p> <ol style="list-style-type: none">Waste Collection Improvement (Ganchimeg)Combustion test of RDF (Suzuki)Progress Report of Basic Design Work (Sato)Next Month Schedule | <p>Next Month Schedule</p> <ul style="list-style-type: none">Only Doi is here from 3 to 24 Nov.Expansion of the collection improvement to Khoroo 4.Start the separate collection in Khoroo 3 from 20 Nov. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>2nd Mixed Combustion Test of RDF with Coal Sampling of Dioxins base on Japanese Standard (1)</p> | <p>2nd Mixed Combustion Test of RDF with Coal Sampling of Dioxins base on Japanese Standard (2)</p> | <p>2nd Mixed Combustion Test of RDF with Coal Sampling of Dioxins base on Japanese Standard (3)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Technical Working Group Meeting (60) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</p> <p>Nov 10, 2006 JICA Study Team</p> | <p>Problem 1: No Housing Association</p> <ul style="list-style-type: none">In khoroo 4, there are 32 apartment buildings. 10 apartment buildings have no housing association. | <p>Problem 2: Necessity of Demolition of Garbage Discharge Point</p> <ul style="list-style-type: none">Who is responsible for demolishing this? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| <div>Problem 3: Garbage Containers</div> <div></div> <div>Who is responsible for maintaining the discharge point clean before the collection? People (housing association), or TUK?</div> | <div>Other Problems pointed out by housing associations</div> <div><ul style="list-style-type: none">TUK's collections are irregular. →New trucks, better maintenance, punctual operation.TUK's collection workers are rude. →EducationTUK doesn't collect fallen leave waste → ?Construction waste →Institutional arrangement. Strengthen supervision and inspection.People in other area come to our area to discharge waste. →Inspection, education, etc.</div> | <div>Problem 4: Cost Reduction</div> <div>People's cooperation to the waste discharge rule ↓ TUK can collect waste more quickly and easily. ↓ One truck can make more trips and collect more waste in one day. Or the less number of trucks can collect same amount of waste in one day. ↓ Waste collection cost is reduced.</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|----------------------------|-----------------------------|-----------------------------|---------------|----------|-------|---|---|---|------|--|-----|--|--|--|------|------------|-------|---|---|---|------|--|-----|--|--|--|------|------------------|-------|---|---|--|-----|--|-----|--|--|---|-----|------------|-------|---|---|--|------|--|-----|--|--|---|------|------------|-------|---|---|---|------|--|-----|--|--|--|------|----------|-------|---|---|--|------|--|-----|--|--|---|------|---|---|
| <div>Designed Number of Trips per Day</div> <table><tr><th></th><th></th><th>Compactor 15m³</th><th>Compactor 8m³</th><th>Dump truck 10m³</th><th>Distance (km)</th></tr><tr><td>Bayangol</td><td>Apart</td><td>2</td><td>3</td><td>2</td><td>11.8</td></tr><tr><td></td><td>Ger</td><td></td><td></td><td></td><td>13.0</td></tr><tr><td>Bayenzurkh</td><td>Apart</td><td>2</td><td>2</td><td>2</td><td>17.2</td></tr><tr><td></td><td>Ger</td><td></td><td></td><td></td><td>23.3</td></tr><tr><td>Songinokhairkhan</td><td>Apart</td><td>2</td><td>3</td><td></td><td>8.5</td></tr><tr><td></td><td>Ger</td><td></td><td></td><td>2</td><td>9.7</td></tr><tr><td>Sukhbaatar</td><td>Apart</td><td>2</td><td>3</td><td></td><td>15.5</td></tr><tr><td></td><td>Ger</td><td></td><td></td><td>2</td><td>16.5</td></tr><tr><td>Chingeltai</td><td>Apart</td><td>2</td><td>3</td><td>2</td><td>15.0</td></tr><tr><td></td><td>Ger</td><td></td><td></td><td></td><td>16.4</td></tr><tr><td>Khan Uul</td><td>Apart</td><td>2</td><td>3</td><td></td><td>16.0</td></tr><tr><td></td><td>Ger</td><td></td><td></td><td>2</td><td>17.3</td></tr></table> | | | Compactor 15m ³ | Compactor 8m ³ | Dump truck 10m ³ | Distance (km) | Bayangol | Apart | 2 | 3 | 2 | 11.8 | | Ger | | | | 13.0 | Bayenzurkh | Apart | 2 | 2 | 2 | 17.2 | | Ger | | | | 23.3 | Songinokhairkhan | Apart | 2 | 3 | | 8.5 | | Ger | | | 2 | 9.7 | Sukhbaatar | Apart | 2 | 3 | | 15.5 | | Ger | | | 2 | 16.5 | Chingeltai | Apart | 2 | 3 | 2 | 15.0 | | Ger | | | | 16.4 | Khan Uul | Apart | 2 | 3 | | 16.0 | | Ger | | | 2 | 17.3 | <div>Why is the collection work slow?</div> <div><ul style="list-style-type: none">Waste is discharged without in bags.Truck wait for people bringing waste.Truck stops the engine at every collection point.Collection workers sort recyclable wastes.Clear work target hasn't been be given to every collection team.</div> | <div>TUK</div> <div><ol style="list-style-type: none">The truck must stops at every entrance to collect garbage.The truck must go to the next entrance immediately after collecting garbage at the entrance. Don't stop the engine. Don't wait there.One worker should go to the next entrance to take out garbage before the truck come.Then, a truck can make 2-3 trips per day.</div> |
| | | Compactor 15m ³ | Compactor 8m ³ | Dump truck 10m ³ | Distance (km) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bayangol | Apart | 2 | 3 | 2 | 11.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Ger | | | | 13.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bayenzurkh | Apart | 2 | 2 | 2 | 17.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Ger | | | | 23.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Songinokhairkhan | Apart | 2 | 3 | | 8.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Ger | | | 2 | 9.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sukhbaatar | Apart | 2 | 3 | | 15.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Ger | | | 2 | 16.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chingeltai | Apart | 2 | 3 | 2 | 15.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Ger | | | | 16.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Khan Uul | Apart | 2 | 3 | | 16.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Ger | | | 2 | 17.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Separate Collection</div> <div><ol style="list-style-type: none">Project Site: 4 apartment buildings behind the State DepartmentStart: 21 Nov. TuesdayCollection Truck: ???Continue until when: ???Most probably, cleaners and waste collection workers will pick up recyclables from recyclable waste discharged. It is difficult to stop them to do this. How should we do?</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Technical Working Group Meeting (61) for THE STUDY ON SOLID WASTE MANAGEMENT PLAN FOR ULAANBAATAR CITY</div> <div>Nov 17, 2006 JICA Study Team</div> | <div>Problem 1</div> <div></div> | <div>Problems raised by Residents</div> <div><ol style="list-style-type: none">Don't park cars.Repair road after digging up.Remove the boots repair shop.We want to close the road by fencing.New building has no OSNAAG.</div> <div>Residents and housing association complain lots but not active for the waste issue.</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Problem 2: Saving Fuel</div> <div></div> | <div>Prevention of Construction Waste Dumping</div> <div><ul style="list-style-type: none">Elimination of waste heaps.Enforcing the rule that private sector can use public space only with permission.Establishing the information system when people find violators.Who give permission to private sector.Example in Japan.<ul style="list-style-type: none">Area controlled by housing association: Housing associationRoad: PolicePark: Municipality</div> | <div>No More Waste Heaps in Khoroo 4</div> <div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <div>Benefits by eliminating waste heaps</div> <div><ol style="list-style-type: none">Scattered waste disappeared.Sweeping work is reduced. → Cost reduction.The town gets clean. → Attracting tourists.The number of stray dogs decreases. → Cost reductionThe number of waste pickers in town decreases. → Attracting tourists and residents.The waste collection work gets easier and quicker. → Cost reduction of collection work.It finds the organizations discharging waste without contract. → Income from business waste increases.People hesitate to throw away garbage. → It helps to change people's attitude.</div> | <div>Lessons Learnt through the Project</div> <div><ol style="list-style-type: none">As for the collection frequency of residential waste, 3 times a week is enough.Entrances of apartments are the most suitable waste discharge points.Housing associations are very important.Difficult to maintain the public space clean. Who should take care?</div> | <div>Each Party's Task in the Waste Collection Project</div> <div>Put PCMUA, Duureg, or TUK to ...<ol style="list-style-type: none">... decides Type A and Type B area.... decides the area and starting date.... explains it to the khoroo governor.... explains the discharge rule to residents.... explains the discharge rule to business entities.... explains to the driver the collection route and collection method.</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Information Tools | Next Step | Role Distribution | | | | |
|--|--|---|------------------|------------------|--|--|
| <div><div>1. Distribution of leaflets to residents.</div><div>2. Distribution of leaflets for business entities.</div><div>3. Fixing the waste collection schedule board at the entrance (inside is OK).</div><div>4. Setting the signboard to prohibit waste discharge at the former discharge point.</div><div>5. Playing melody</div></div> | <div><div>1. Expansion of the improved collection area by CMPUA's initiative.</div><div>2. Prohibition of using dust chute system.</div><div>3. Promotion of separate discharge.</div></div> | <table><tr><th>Relevant parties</th><th>Required actions</th></tr><tr><td><div><div>•TUK</div><div>•Duureg office</div><div>•Khoroo office</div><div>•Housing association</div><div>•OSNAAG</div><div>•PCMUA</div></div></td><td><div><div>•Production of</div><div><div>–Leaflets to residents</div><div>–Leaflets to organization</div><div>–Waste collection schedule sheet</div><div>–Signboard to prohibit waste discharge</div></div></div><div><div>•Distribution and setting up above items</div></div><div><div>•Monitoring</div><div><div>–Residents</div><div>–Business entities</div><div>–TUK's trucks</div></div></div></td></tr></table> | Relevant parties | Required actions | <div><div>•TUK</div><div>•Duureg office</div><div>•Khoroo office</div><div>•Housing association</div><div>•OSNAAG</div><div>•PCMUA</div></div> | <div><div>•Production of</div><div><div>–Leaflets to residents</div><div>–Leaflets to organization</div><div>–Waste collection schedule sheet</div><div>–Signboard to prohibit waste discharge</div></div></div> <div><div>•Distribution and setting up above items</div></div> <div><div>•Monitoring</div><div><div>–Residents</div><div>–Business entities</div><div>–TUK's trucks</div></div></div> |
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