Logging Policy
OJSC “MSY”

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OJSC “MSY” Operation Wood Structure

OJSC “MSY”
Managing Director

Operation Wood
Wood Supply, Silviculture, Dispatching

LLC “Finleskom” - accounts with subsidiaries, wood sales, procurement of machinery, working clothes, etc.
LLC “Ezhvatrans” - wood transportation
LLC “Novyi Les” – nursery

LLC “Ezhvadorstroy” - forest road construction
LLC “Palauzsky LC”
LLC “Udorales”
LLC “Noshulsky LC”

LLC “Koygorodsky LC”
LLC “Ezhva”
LLC “Mobilnyi les”
LLC “Sysolales”

LLC “Timsherles”
LLC “Nemles”
LLC “Prupt”
LLC “Verkhnyaya Vychegda”

Current headcount 3945 persons
Leased Areas of OJSC “MSY” and subsidiary logging operations

Annual Allowable Cut
5,1 mln. m³

HW 51%

Administrative districts
Mondi Syktyvkar forest lease
Mondi
Noshilskiy LC
Udogales
Udorales
New forest lease for STEP
# Logging operations:
## target logging and wood supply volumes

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>After STEP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MSY leased areas (AAC)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,1</td>
</tr>
<tr>
<td>Mln. cub.m</td>
<td>3,2</td>
<td>5,1</td>
<td>5,1</td>
<td>5,1</td>
<td>5,1</td>
</tr>
<tr>
<td><strong>Logging in the leased areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,1</td>
</tr>
<tr>
<td>Mln.</td>
<td>2,1</td>
<td>2,5</td>
<td>3,2</td>
<td>3,9</td>
<td>5,1</td>
</tr>
<tr>
<td>% of AAC</td>
<td>66</td>
<td>50</td>
<td>62</td>
<td>76</td>
<td>100</td>
</tr>
<tr>
<td><strong>Road construction, km</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>225</td>
</tr>
<tr>
<td></td>
<td>101</td>
<td>195</td>
<td>195</td>
<td>225</td>
<td>225</td>
</tr>
<tr>
<td><strong>Pulpwood from leased areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3,4</td>
</tr>
<tr>
<td>Mln.</td>
<td>1,38</td>
<td>1,65</td>
<td>2,15</td>
<td>2,57</td>
<td>3,4</td>
</tr>
<tr>
<td><strong>External pulpwood and chips</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0,85</td>
</tr>
<tr>
<td>Mln.</td>
<td>1,72</td>
<td>1,45</td>
<td>0,75</td>
<td>0,83</td>
<td>0,85</td>
</tr>
<tr>
<td><strong>Pulpwood consumption at the Mill</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4,25</td>
</tr>
<tr>
<td>Mln.</td>
<td>3,1</td>
<td>3,0</td>
<td>2,9</td>
<td>3,4</td>
<td>4,25</td>
</tr>
<tr>
<td><strong>% pulpwood supply from the leased areas</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td>45%</td>
<td>55%</td>
<td>74%</td>
<td>76%</td>
<td>80%</td>
</tr>
</tbody>
</table>
Silviculture in the leased areas

Area, ha

Total cost, mln. RUR

- Forest plantation, ha
- Soil preparation, ha
- Natural reforestation, ha
- Young growth thinning, ha
- Total costs, mln. RUR

2004 2005 2006 2007 2008 2009 2010 2011

0 1000 2000 3000 4000 5000 6000 7000

0 10 20 30 40 50 60 70 80 90 100

24.10.2008
Logging modernization:
Transition from tree-length to cut-to-length (CTL) technology

- CTL: 90% in 2011
- Traditional: 10% in 2011

Graph showing the transition from 2006 to 2011.
## Logging operations: headcount, persons

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<tr>
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<th>2009</th>
<th>2010</th>
<th>after STEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logging</td>
<td>2823</td>
<td>2720</td>
<td>1942</td>
<td>1915</td>
<td>2020</td>
</tr>
<tr>
<td>Rafting</td>
<td>178</td>
<td>185</td>
<td>195</td>
<td>237</td>
<td>277</td>
</tr>
<tr>
<td>Road construction and maintenance*</td>
<td>159</td>
<td>213</td>
<td>312</td>
<td>310</td>
<td>310</td>
</tr>
<tr>
<td>Wood hauling**</td>
<td>74</td>
<td>102</td>
<td>112</td>
<td>130</td>
<td>147</td>
</tr>
<tr>
<td>White-collars</td>
<td>492</td>
<td>473</td>
<td>450</td>
<td>425</td>
<td>400</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3800</td>
<td>3422</td>
<td>3011</td>
<td>3017</td>
<td>3154</td>
</tr>
<tr>
<td>Output per person, m³/person</td>
<td>497</td>
<td>630</td>
<td>794</td>
<td>928</td>
<td>1017</td>
</tr>
</tbody>
</table>

* since 2009 incl. headcount of LLC “EzhvaDorStroy”

** excl. LLC “Ezhvatrans”
Logging modernization problems

- Low quality, lack of new Russian logging machinery designs for the Northern climate
- Lack of skilled personnel including young specialists in the Komi Republic
- Undeveloped market of logging, road construction and reforestation services in the Komi Republic
Traditional technology
«+» and «-»

«+»
- Relatively low cost of machinery
- Affordable repairs
- Insignificant losses during downtimes
- Plenty of used machinery

«-»
- Low reliability of machinery
- Low efficiency, high production price, low salaries
- Significant negative impact on forest/soil
- Lack of machinery suppliers
- Heavy-load conditions, high risk of injury
- Aging of personnel; young people refuse to work
<table>
<thead>
<tr>
<th><strong>CTL technology</strong> «+» and «-»</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>«+»</strong></td>
</tr>
<tr>
<td>High efficiency, production and salaries</td>
</tr>
<tr>
<td>Machinery reliability with due maintenance</td>
</tr>
<tr>
<td>Work conditions and safety</td>
</tr>
<tr>
<td>Less negative impact on forest/soil</td>
</tr>
<tr>
<td>A big choice of machinery and suppliers</td>
</tr>
<tr>
<td>Attractiveness for young people, long-term availability</td>
</tr>
</tbody>
</table>
Transition to CTL technology is necessary

- Aging of employable rural population
- Movement of young people and active population to urban areas
- High cost of traditional technology, expensive fuel, lack of new machinery
- Low attractiveness of traditional technology, heavy-load conditions

Employable population forecast in Komi Republic

Employable population declines by 8,0 thou people a year
Solutions for logging modernization problems

- Training of young specialists
- Cooperation with educational institutions
- Retraining and qualification improvement
- Performance improvement (increasing own logging volume)
- Purchase of more efficient machinery
MSY Policy on CTL technology implementation

- Stepwise implementation
- Training and retraining of own operators
- Extra employment: wood truck drivers, road constructors, forestry engineers
- Dismissal of discipline violators in the first place
- Reorganization/reduction of low-efficient units
- Contracting/subcontracting small logging companies for small-scale forest sites