

Health and Environmental Impact of Mercury in Small-Scale Gold Mining in the Philippines

UNEP-DENR Global Forum on Artisanal and Small-Scale Gold Mining, December 07-09,2010, Manila



Outline of the Presentation

- Background of Small-Scale Gold Mining in the Philippines
- Environmental Impact
- Health Impact
- Recommendations

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Small-scale gold mining

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Background of small-scale gold mining in the Philippines

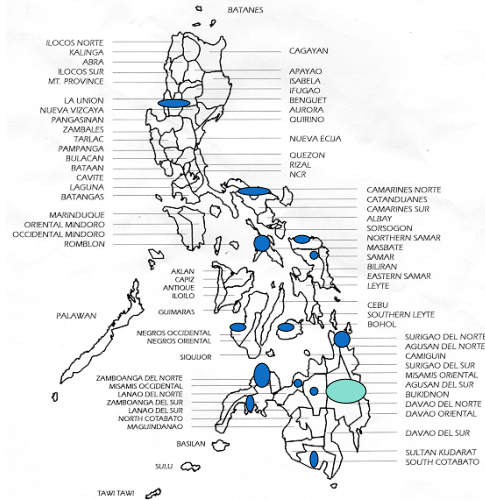
- In the mid-80's , gold miners engaged actively in processing the ore using the crudest method of gold extraction by amalgamation
- improper use of mercury during gold smelting and uncontrolled disposal of mercury wastes into the environment
- estimated that some 26 tons of mercury are dumped annually into bodies of water in Mindanao
- population swollen from 70,000 to as much as 100,000

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MAP OF THE PHILIPPINES



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Philippine Annual Gold Production



Philippine Annual Gold Production, 1997 – 2008 (in kilograms)

Year	Total	Small-Scale	Large-Scale
1997	31,199	14,062	17,137
1998	34,038	19,859	14,179
1999	31,050	17,045	14,005
2000	36,540	21,193	15,347
2001	33,841	22,656	11,185
2002	35,848	27,993	7,855
2003	37,843	31,473	6,370
2004	35,464	29,473	5,991
2005	37,488	32,117	5,371
2006	36,141	29,361	6,780
2007	38,792	31,193	7,599
2008	35,568	28,198	7,370

Sources: U.S. Geological Survey Minerals Yearbook
Mineral and Geological Survey

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Small-Scale Gold Mining

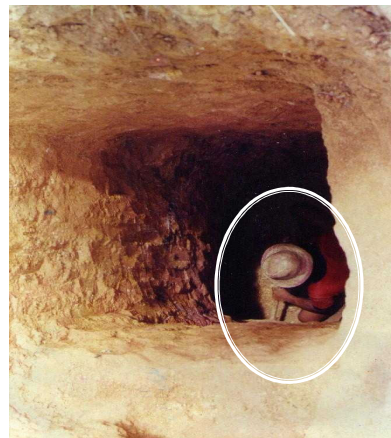


Small-scale mining operations have polluted tributaries and water systems resulting in fish kill aside from adversely affecting the cattle/livestock industry and agricultural production

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Small-scale mining practices



Crude methods and safety issues

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Small-scale mining practices



Testing the ores for gold before loading the ores in the sacks.

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Small-scale mining practices



Adding mercury to the mixture of ores and water.

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Small-scale mining practices



Residue after panning operation where most of the water are removed.

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Small-scale mining practices

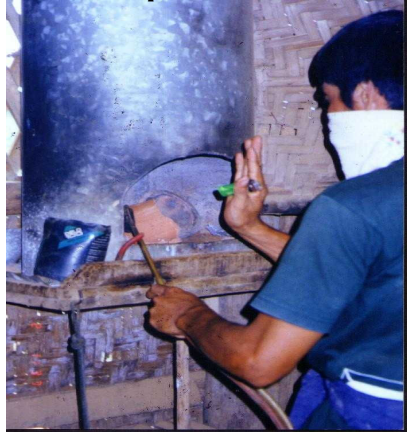


Placing of residue in filter cloth to remove the mercury from the residue.

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Small-scale mining practices



Blow-torching is still rampant despite the introduction of the retort method

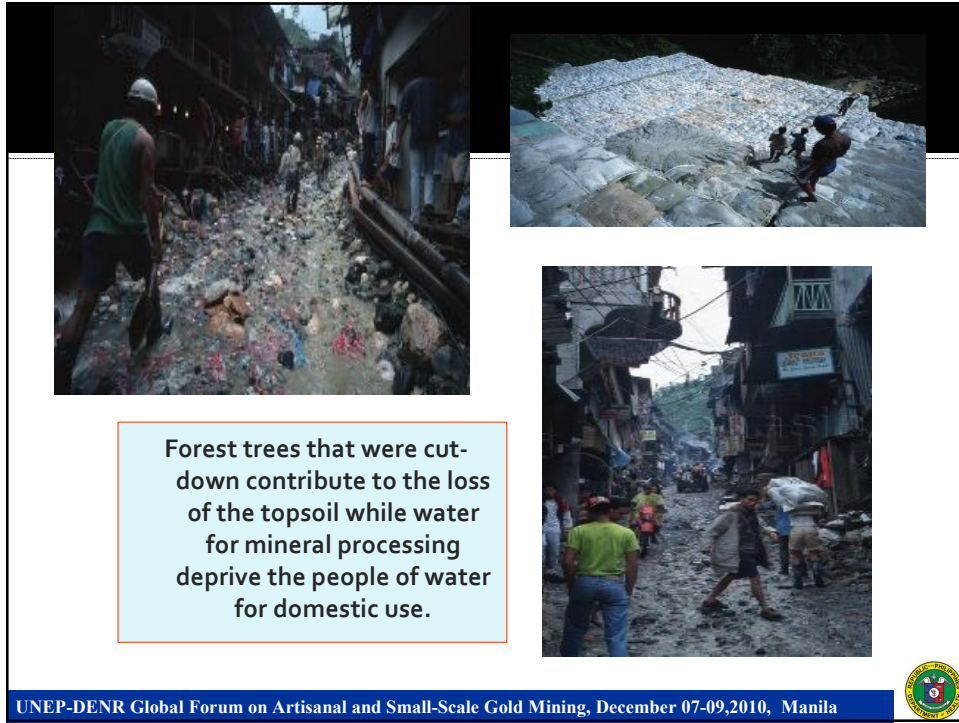
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SMALL-SCALE GOLD MINING OPERATIONS

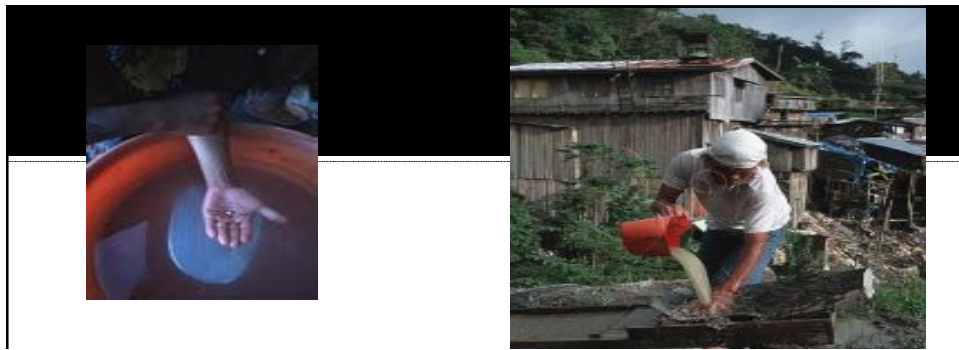


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Forest trees that were cut-down contribute to the loss of the topsoil while water for mineral processing deprive the people of water for domestic use.

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https://www.yunbaogao.cn/report/index?reportId=5_14833

