



PAPER ON SMALL

A number of National and international initiatives have been taking place in the country to fund and facilitate projects and programmes to address these growing concerns. An educational project was funded by AusAID, PNG Government and private companies regarding safe mining practices. Asian Development Bank (ADB) and Japanese Social Development Fund (JSDF) funded by the World Bank Project also assisted meaningfully. A current program that has a very significant and notable impact on the lives of these indigenous people and others alike is the Small Scale Mining Training Centre based in Wau, a mining township well known for early mining in the colonial era. The program is an initiative of the Mineral Resource Authority of Papua New Guinea and funded by European Union's Mining Sector Support Program. It is managed by Projekt Consult of Germany, a leading institution dealing with issues in small scale mining throughout the world.

The main concern regarding the Training Centre is its sustainability after European Union ceases funding. Will the responsible Authority which is Mineral Resource Authority of Papua New Guinea and other stakeholders be able to carry on with what European Union has started? Will the training centre be able to contribute to a sustainable future for the tens of thousands of indigenous small scale mining communities throughout Papua New Guinea?

The government of Papua New Guinea, our international

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## Environmental Impacts of Small scale mining.

The impacts of small scale mining on the environment varies according to geographical setting and methods of mining used. The risks involved include tree cutting and digging, destruction of vegetation and top soil exposure, soil erosion, river/water pollution through the use of mercury and discharge of particulate matter , acid mine drainage, mercury vapor and clouds of dust emissions and many others. Environmental degradation is severe when thousands of miners are spread throughout the country.

Threats posed by these environmental destructions include loss of biodiversity and extinction of unique and endangered species. For instance, in the Wau/Bulolo area, illegal mining is happening in protected areas such as the McAdams National Park known to protect the "clinky pine tree", the world's

## SOCIAL ISSUES ASSOCIATED WITH SMALL SCALE MINING.

### HIV/AIDS, Gender Equality & Personal Viability.

Production in large cash and migration of people into mining communities have resulted in the increase of alcohol and drug abuse, gambling, violence against women, prostitution, marital problems, lack of education and general lawlessness. As a consequence of this social disorder, HIV/AIDS is a growing concern in all small scale mining communities. Young women and mothers, struggling to make a living, tend to get involved in sex trade and prostitution to support themselves and their families.

## **OTHER CONSTRAINTS OF SMALL SCALE MINING.**

### **i) Legal and administrative constraints**

There is no specific law governing the Small Scale Mining sector like in other countries where small scale mining exists. Unfortunately, the PNG Mining Act as well as the mining regulations mentions the small scale mining sector only briefly. There is no gender equity provision, nor any reference made to that effect in these documents. It is disappointing to note that the existing legal framework in mining does not support women in mining, let alone women in small scale mining.

### **ii) Lack of representation and support**

Small scale miners for a long time have been invisible and have been hiding under their domestic roles. There has not been an opportunity to organize them under a structure to represent their interests. Currently, there is one miners association, which is not active now, called Wau Bulolo Gold Miners Associations. Provision has been made for a female deputy



Ø **As a home maker (involved in providing care and support to her family)**

Women in SSM communities need to manage their homes as this is their primary responsibility. They must ensure that their families are strong, healthy, and u

domestic roles.

The Small Scale Mining Training Centre is based in Wau, Morobe Province. The training centre is based in Wau because it was a colonial mining township and well known for the gold rush in the early 1920s. The training centre comprises classroom facilities, administration blocks, dormitories for females and males respectively, canteen and a demonstration shed for simulation activities.

## 1.2 Training programs and courses taught.

### i) Training of Trainer Program

A program which involved the training of trainers who then become trainers at the training centre was initiated after the inauguration of the centre. This training was for the duration of six months and was conducted on need basis. The 8 graduates from the initial TOT program are currently conducting training for the miners. The trainers have different backgrounds and professions ranging from geology, environment, mining & engineering, chemistry, teaching, business and technical background. Knowledge and expertise from these diverse backgrounds are put together with the help of hired consultants to develop training materials on issues related to mining.

### ii) Small Scale Miners' Training Program

The training program is divided into four levels of study starting from the basic courses in level 1 and increases in complexity with subsequent higher levels. Training is conducted on two levels. The theoretical aspect of the training is the trainer to participant interaction, role plays and discussions during training. The practical aspect of the training is when participants are taken out into the field to have hands on experience, site seeing or conduct simulation activities to enforce their theoretical knowledge. The contents of the training courses are organized as modules under the four levels as shown in table 1. After the participants complete each level of course, a certificate of attainment is presented after the required period of study is completed.

#### Levels of courses offered at the Small scale mining training centre.

There are four levels of courses offered at the small scale mining training centre.

The courses under the higher levels of study are building up from the basic levels so the levels will have to be followed through to complete the requirements of the training program.

The training of small scale miners started in September 2009. So far SSMTTC has trained seven batches of participants that have undergone training in Level 1 courses. Level 2, 3, and 4 courses are under development and will be introduced at a later date.

**Table 2.**

Course Level	Attainment	Course Duration
Level 1:	Certificate 1 in Small Scale Mining	2 weeks
Level 2:	Certificate 2 in Small Scale Mining	2 weeks
Level 3:	Certificate 3 in Small Scale Mining	2 weeks
Level 4:	Certificate 4 in Small Scale Mining	2 weeks

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### SSMTC COURSE STRUCTURE

The trainings conducted in the training centre address almost 100% of all the constraints/challenges as mentioned earlier in this paper. Since small scale mining regularly tops the list of the world's worst pollutants and causes severe environmental destructions as published by international watchdogs, the training centre ensures that the topic of **responsible mining**, the underlying objective of all the trainings that are conducted, is addressed in all the modules. Appropriate technology and best practice methods are encouraged in the training. Table 3 and the following text briefly discuss the contents of the modules/topics taught at the training centre to overcome some of the challenges faced by small scale miners.

**Table 3:** Course modules offered at the training centre.

Module (M) No.	Course Module	Levels Covered
M1	Background information on small scale mining in PNG.	1
M2	Laws governing Artisanal & Small Scale Mining in PNG.	1, 2, 3 and 4

- Child labour
- Health and Safety at Workplace
- Gender equality and Discrimination
- HIV/AIDS at Workplace (Discrimination)
- Elimination of forced and Compulsory Labour

### **Module 3**

Geology studies help miners to know the fundamentals of how gold is formed; its properties and areas where gold can be found. These helps miners to locate gold bearing areas easily thus increasing their gold productions. Buying and selling of gold is also a risky business so simple tests to distinguish between gold and other metals is also taught. Simple calculations on gold prices are taught to miners so that they can have a fair idea about the money they will receive when they sell their gold to buyers.

### **Module 4**

Prospecting techniques helps to understand how placer gold deposits are formed. Failure to sample and estimate properly can result in a tremendous waste of money and effort. This also helps in unnecessary destruction of the environment such as clearing of the of forests and vegetaion. Prospecting techniques helps to learn basic sampling techniques of placer deposits and estimate the economic viability of the resource.

### **Module 5**

Mining and processing techniques encourage small scale miners to improve their mining techniques from artisanal to semi mechanized or mechanized level. This helps miners to improve their technical know how to overcome the traditional methods of mining and increase gold productions. This module also highlights appropriate technology of mining techniques such as the use of environmentally friendly mining equipment, construction techniques in reducing environmental impacts such as sedimentation, soil erosion. The gold recovery techniques and equipment



benefit from the training because the dangers of sex trade and prostitution are pointed out clear to them.

### **1.3 Proposed Outreach Program**

The Outreach Program involves trainers going into the mining communities to provide capacity development support for the miners in their actual





sector had been a critical issue with previous and current donor funded projects. This need will be addressed thus the way forward will be more beneficial in terms of directing capacity development programs for greater impact than previously done.

#### **MAJOR CONCERNS OF SSMTTC AND SMALL SCALE MINERS OF PAPUA NEW GUINEA.**

The small scale mining training centre is a vocational type of institution touching the lives of indigenous communities of Papua

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Table 4: Key Issues and Recommendations.

	<b>Key issues/questions related to SSM in PNG</b>	<b>Suggested recommendations or ideas to overcome these challenges.</b>
<b>1</b>	Updated data, mapping on alluvial gold occurrences and general statistics on the total population on small scale miners and communities are lacking and has no record at all. Small scale mining sector has contributed significantly to rural and economic development of this country unfortunately that silent contribution has not been recognized fully.	A baseline survey, data collection and statistics on small scale mining in Papua New Guinea are vital to use in order for developments to be successful in the sector.
<b>2</b>	<p>There are 3 different contexts of SSM in PNG.</p> <p><b>a)</b> SSM activities co-exist within Mining leases/in areas where large mines operate.</p> <p><b>b)</b> SSM activities on customary land</p> <p><b>c)</b> SSM activities on traditional land acquired by the Government and leased to small scale miners.</p> <ul style="list-style-type: none"> <li>• Each of these areas face different challenges/ issues and needs to be addressed separately and accordingly.</li> </ul>	<p><b>a)</b> Initiatives by large scale mines.</p> <ul style="list-style-type: none"> <li>- Currently OK Tedi Gold/Copper mine through the Papua New Guinea Sustainable Development Programme has initiated a Pilot Project on small scale mining to assist the economic well-being of local communities after the mine closure.</li> <li>- Points <b>c)</b> and <b>d)</b> are addressed by Mineral Resource Authority of PNG through the Small scale mining training centre.</li> </ul>

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Economics in small scale mining is a key issue in addressing poverty alleviation within indigenous communities. Some

## CONCLUSION