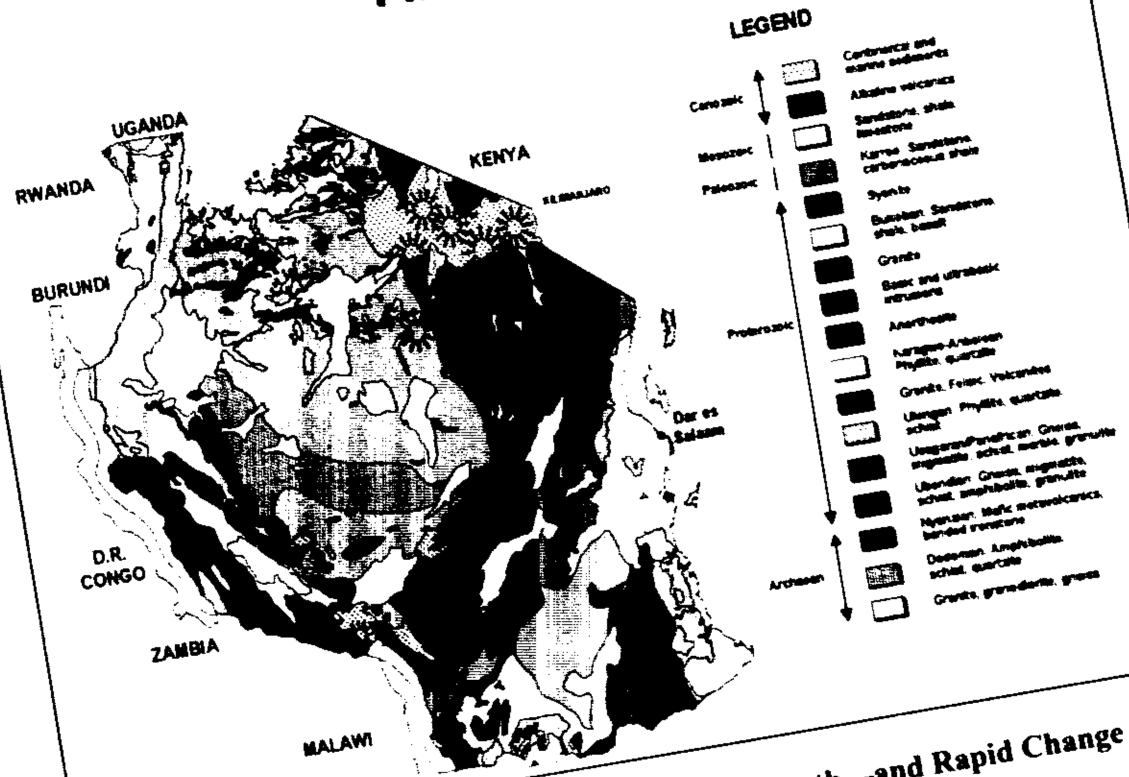
Tax and Mining Policy Project

Final Report



Tanzania's Mineral Wealth is Generating Growth—and Rapid Change

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Tax and Mining Policy Project

Final Report

The Tax and Mining Policy Project began in mid-2001 and ended in December 2003. Just at that time large scale gold mining came into production in Tanzania. The gold-rich greenstone belts and gem deposits throughout the eastern side of the Rift Valley had already produced revenues for small-scale local Tanzanian miners beginning in the early-1990s, once the sector was liberated from state monopoly management. The ending of the state monopoly and the ensuing mining rush has been a period of very rapid change for the country. The pace of change is accelerating as modern industrial mining grows. The Project worked with the government of Tanzania to analyze the benefits and risks of this new trend. Based on previous studies of the mining sector and its policy context, the Project foresaw the benefits and attempted to mitigate the negative impacts of a mining boom.

The Project focused on four major areas to assist Tanzanians to address the magnitude of these changes. These areas were outlined in the contract between USAID and the Project. These contract activities and deliverables are as follows.

- ***Activity 1: Reviewed the tax policies.*** This activity focused on building analytical capacity through structured policy dialogue and training. The expected results were written clarification on issues of conflicting interests, standardization of key procedures and written instructions for officials and the public.
- ***Activity 2: Reviewed government policy and plans for utilizing income from mining.*** This activity entailed reviewing government policy and plans for mining tax revenue. The expected result was the development of a strategy document for the investment of these revenues.
- ***Activity 3: Diversification of economic activities.*** This activity provided training, technical assistance and market development in mining areas to generate jobs. The expected results were two-fold. First, the Project was to develop pilot programs for value-added activities. Second, it was to assist in further developing the existing legal framework for the coexistence of small scale and large scale mining.
- ***Activity 4: Address environmental concerns.*** This activity focused on the development of local and national plans for mitigating the environmental impacts of small scale mining. The expected results were suggested changes in the laws and regulations that would limit environmental impacts of small scale mining.

These contract deliverables between USAID and the Project were not only met but exceeded in all cases. More importantly, the Project's impact translated into job creation and poverty reduction in the rural areas of Tanzania. A recent household survey has confirmed that the number of Tanzanians living below the poverty line has decreased since 1992. This is contrary to the more widespread pattern found in IMF and World

Bank-funded studies of mineral-rich countries, which documented that poverty increased rather than decrease in most countries.

Reviewing Project Goals

Activity 1: Reviewing the tax policies

The tax policy reform program was the most challenging sector in which the Project focused. A combination of approaches was used over the two year period in order to reach contract deliverables. The Project focused on working with mining tax auditors in the regional offices of the Tanzania Revenue Authority (TRA). Three intensive trainings were conducted by the Project that introduced TRA to international best practices. The first and second training grounded TRA and other stakeholders in the theory behind tax policy and tax collection.

USAID's generous procurement of 30 laptops for training programs proved to enormously deepen the quality of learning in the 2002 mining income-tax training. TRA bought into this training thoroughly, providing advanced training, travel and per diem for the participants. For many auditors from outlying regions, it was their first experience with computers. TRA, recognizing the need for basic computer skills, agreed to provide preliminary training in Excel for the participants. While some still need to improve their basic skills, the fascination of participants with their ability to work out problems on the computer was evident throughout the training. They regularly stayed late at work, and their group reports at the end of the training went into far greater depth than before.

TRA has had plans for computerization for more than a decade, but it had become such a major project that it advanced at a snail's pace. All procedures and data are being reviewed and revised to go into a comprehensive new system. Since there are so many inconsistencies in the present system, this process keeps stalling. IBI's introducing computer skills at the working level proved revolutionary. The regional auditors from five mining regions and five headquarters offices were allowed to take laptops with them after the last training to practice at work. We expect to see a gradual improvement in productivity and transparency as the working level begins submitting their data in electronic format. In the past, auditors in different regions applied different taxes and rates, and taxpayers had little recourse.

The first two training courses, together with use of the computers offered by USAID resulted in the standardization of key procedures through computerization. This was revolutionary for TRA as the regions submitted data in the same format based on the same taxes. Computerization coupled with a clear understanding of how this fit into the overall revenue collection strategy led the first success of the tax policies component.

The second success story came with the final training course. TRA officials had continued to believe that company accounts lacked transparency. They likened major mining companies accounting procedures to the problem they already knew, that dealers were undervaluing their gem exports. There is truth in the undervaluation problem for gems, but it is a knotty problem—and gem dealers' informal accounting practices are fundamentally different from the international accounting standards practiced by multinational mining companies. Through the second and third training courses, TRA auditors began to understand the difference.

Under-valuation of gem exports is a virtually universal form of hedging in a high-risk sector. Unlike gold prices, which are published twice daily, gem prices vary enormously. Two stones that look identical to the casual observer can have more than a hundredfold difference in value. This problem is difficult to control with present technology. TRA identified this problem and the Project met the need.

The final tax training funded by the Project brought in a real-world expert on mining tax auditing and accounting. This activity was focused on clarifying issues that were conflicts of interest between TRA and the international mining firms. The training was conducted by an experienced mining accountant from Zimbabwe. He covered international accounting standards review, mining economics, and actual examination of mining company books. To initiate a dialogue between TRA and the mining companies, both were invited to participate in the training. This training and dialogue process was a critical conclusion to the Project's work with tax policy.

This training allowed TRA to ask a mining tax specialist specific questions that were never before answered. For example, TRA was able to understand the intricacies of modern mining, its terminology and jargon. These lessons in the classroom led TRA auditors to conclude that some of their previous conceptions were wrong. The process of educating TRA on this sector will need to continue, but it is off to a sound beginning.

The Project can claim progress was made in reducing multiple nuisance taxes that used to be paid at several different collection points. The project also contributed to getting mining equipment zero-rated for VAT, reducing the cash-flow burden and hassle of VAT refunds. All of these results, led to the clarification of issues, the standardization of procedures and written instructions for officials and the public. One example is the summary-sheet on applicable taxes attached at the back of this report.

Certainly, fiscal reform is still needed to make a major improvement in both the business climate and the government revenue stream in Tanzania. However, the Project demonstrated that a focused approach, grounding participants in fiscal theory, introducing modern methodologies and equipment, and bringing in real-world practitioners to complete the training loop does produce results.

Activity 2: Reviewing government policy and plans for utilizing incomes from mining

On policy issues the project was able to bring top-level global resources to bear in support of local solutions. In 2003 several of the policy issues on which the project has been working became hot topics in parliament and the press. Was Tanzania getting appropriate benefits from mining? Enough tax revenues? Compensation to people dislocated by international mining companies? Community development? Protection from negative environmental impacts?

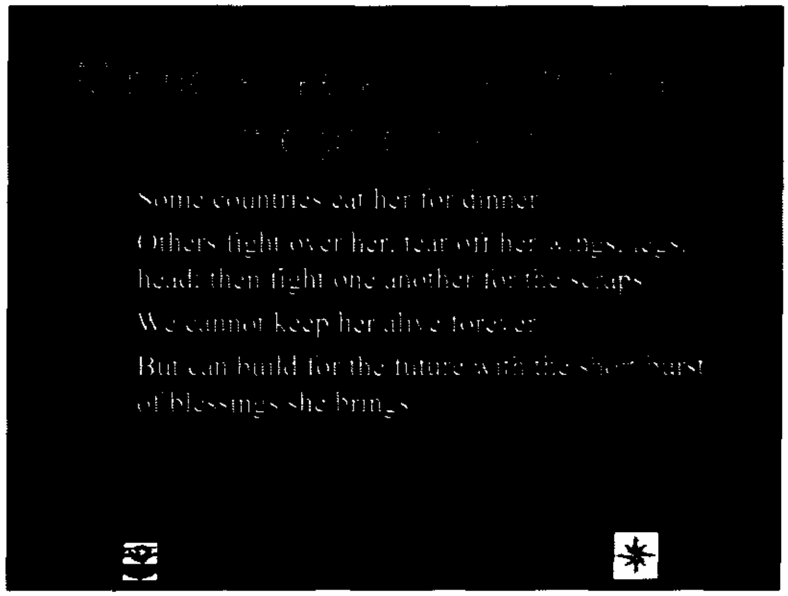
The project's two workshops in fall 2003 were thus quite timely. The first Mining Awareness workshop was sponsored by the Chamber of Mines and intended to educate the press on mining issues. Some thirty representatives of every major media organization in the country participated. They toured Geita Gold Mine and Kahama Gold Mine to see how gold is mined, processed and exported. Also, they attended a day-long series of presentations on mining law, taxation of mining, and economic and social impacts of mining. The Minister of Energy and Minerals opened the proceedings, and--quite exceptionally for a sitting Minister--stayed throughout the day. The presentations made by project personnel Godwin Nyelo and Lucie Phillips are appended to this report.

The second workshop presented the mining sector to parliament on November 8-9, 2003. Again the first day was a tour of the two major mines and the second day saw four presentations on the same topics. This time the Prime Minister and Minister of Energy and Minerals, Minister of Finance and Minister for Poverty Alleviation all participated throughout the day, together with 220 parliamentarians. Parliamentarians and journalists who participated in the tours seemed to understand much better the magnitude and complexity of mining investments, including the improvements in roads, water supply, electricity, housing and community development projects in neighboring communities.

The point was made in Nyelo's and Phillips' presentations that minerals are depleting resources. The project has been able to produce government revenue projections, contained in Nyelo's presentation (appended here), showing that mining revenues are likely to be declining sharply by 2015. This means that there is a window of opportunity opening up now and lasting ten to fifteen years. Both government and the private sector have to move quickly to create the foundations of sustainable development during this period. Several of the parliamentarians' comments and questions focused on this concern.

The data to project mining revenues in Tanzania had never before existed. The project's ability to produce and document such data is a lasting contribution to sound strategic planning and stakeholder dialogue in Tanzania.

In December 2003, ESRF held a workshop to publicly release and explain its strategy document for investing government revenues from mining. Forty participants took part, including government officials from mining districts, mining sector stakeholders, the press, academia, donors, and non-governmental organizations working in mining areas. The



presentations, the study, and the report of that workshop are all annexed to this report.

Through three workshops and the release of a major study the Project developed, publicized and educated the government, the media and civil society on the need to treat government income from mining as investment income rather than ordinary revenues and allocate it wisely. What was more important than simply meeting a contract deliverable was the timing and the impact of the Project's intervention. At a time when government and civil society were examining and questioning where the money was going. The Project provided well researched options for policy makers to consider.

This approach contrasted sharply with TRA's IMF-funded attempt at a new income tax law in late 2003 by fiat. With an inclusive policy development process as a guide and comparison, the government and civil society largely rejected the attempt to impose a law that could seriously slow down private investment and economic growth. While the Project cannot claim all the credit, a multi-year process of building consensus and working toward common solutions through the present project and its predecessors clearly left an indelible mark on future policy processes in Tanzania.

Activity 3: Diversification of economic activities

The USAID Tax and Mining Policy Project began building a value-added chain in the mining sector in the first year of the project. At present, parliament and the press are demanding that more of the value-added chain be developed creating jobs, skills and economic growth. From a single two-week training program with a wire-wrap jewelry master craftsman in the first year of the project came the seeds of a jewelry industry. Trainees in the first such training course created new businesses, showed their work in craft shows, and sold to both the tourist and local markets. These first steps were facilitated by the Project through training in wire-wrapping, cutting and tumble-polishing of opaque gem material, and faceting and polishing of top quality gemstones. The project provided training in each of these areas. From the first gem craft training came 12 new small businesses with 35-40 employees. They exhibited their products at the National Gallery of Art and the Saba-Saba and Nane-Nane trade fairs this year. They are selling to both the local and tourist markets.

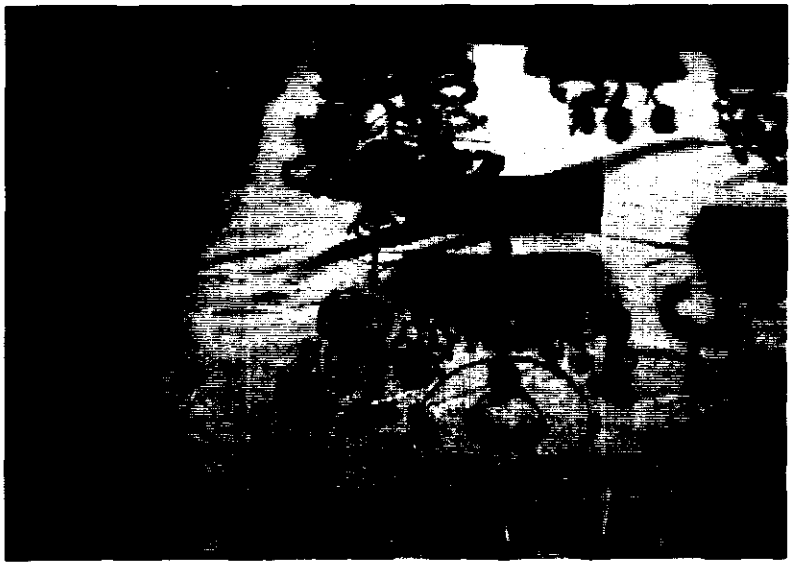


Figure 1 ***Tanzanians made the above jewelry in a two-week course***

Additional training programs were completed in the last quarter of 2003, covering the following skills areas:

- Cabochon cutting and tumble-polishing, to make stones suitable for wire-wrap jewelry and other settings from what was previously waste-material at gem mines.
- Faceting and polishing of gem-quality stones.
- A second wire-wrap class, together with a master class for previous trainees.

In each case sustainability is built into the programs. Trainees paid part of the costs, enough to establish a market for in-country trainers. Trainees from the first course were hired as co-instructors for subsequent courses. Trainees received illustrated textbooks and a full toolkit, plus information on how to order tools and supplies. They took entrepreneurship training a few weeks after their gem-skills training, to learn to market their products to targeted niches and to manage the business aspect of their production. They formed into an email and personal network to help one-another through the start-up process. Equipment, such as industrial-scale tumblers, diamond saws, a bead-making machine, polishing wheels, chairs and worktables have been donated by the project to the Arusha Gem Centre. The Centre, co-located with the zonal mines office, is being developed by the government as a center for information and training on gemology.

Again, the project clearly created a pilot program for value added activities per the contract. More important, the pilot program produced not just lessons learned but jobs and businesses. USAID's impact was simply not another training course but a new industry that utilizes cast off materials to make jewelry marketed at tourists.

The small-scale mining extension program had similar aims—create jobs for rural Tanzanians to spread the wealth from mining, alleviate rural poverty, and generate diversified economic growth. Many miners are farmers earning on average about $1 per day of labor. As miners, they can average $10 or more per day. Even those who cannot afford to be miners earn 6 times as much doing manual labor in mining communities as they could as field laborers on farms. Once mining was liberalized in the early 1990s, the people flocked to mining quickly—at last count in 1995 there were 550,000 artisanal miners. Most of those were participating in mining rushes, however, skimming off the surface deposits and moving on when a new area was discovered. They created some positive impacts on communities, including improving roads, schools, clinics and commercial infrastructure. There were also a number of negative environmental impacts, however: pitted landscapes, waste heaps, dust, water pollution, mercury traces in air and water, and increased transmission of communicable diseases (including HIV AIDS).

The project has demonstrated that stable sustainable small-scale mining can coexist with multinational mining. The big companies and the more speculative exploration companies often referred to as "juniors" buy concessions and explore all potential mineral-bearing areas in the normal course of good business practice. That movement, however, quickly has made it difficult for Tanzanians to file new small claims. Since capital-intensive mining is more efficient, cleaner, safer and more environmentally sound than small-scale mining, people who were not aware of the job-loss implications thought such a trend might be favorable for Tanzania.

Figure 2 ***The project moved miners from this approach to . . .***

The small mining extension program funded by the project first field-tested training manuals developed under a previous project, then expanded the program to major small-scale mining areas. It operated a training-of-trainers program for zonal mining officers, and then funded their travel to mining sites to provide training in proper mining procedures. The themes include mining only on legal claims, observing safety and environmental precautions, and investing in equipment to increase productivity. A number of model miners have been identified. They invested in their mines and follow project recommendations thoroughly, serving as examples to others and building a cadre of indigenous Tanzanian successful mining companies.

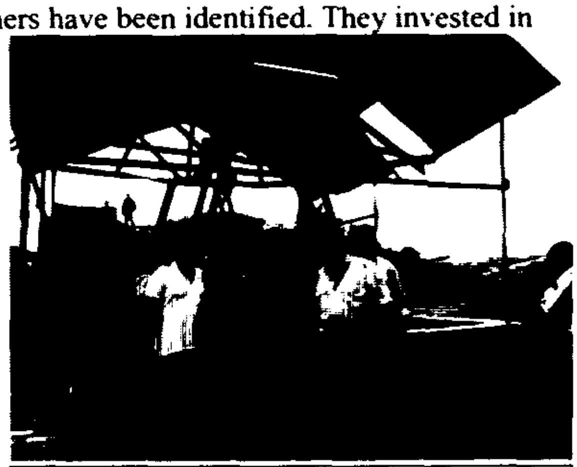


Figure 3 ***Formal small-scale mining***

The second year of the project was the first year in which the mining extension program expanded beyond the pilot-test phase. A video on proper procedures and successful miners was added to the manuals and posters tested in project-year 1. The results are:

- 206 new small-mining

companies, with legal primary mining licenses

- 10,000 to 18,000 jobs on those mining claims, and another 40,000 to 50,000 suppliers, guest-houses, restaurants, transporters, etc. serving the mining areas.
- 14 new businesses providing supplies and services to large mining companies
- 621 small-scale miners trained in environmentally friendly and safe mining practices.

By improving the indigenous small-scale mining sector, the benefits of mining continue to be spread throughout the country instead of concentrating them in a few hands.

The legal framework for creating so many jobs and spreading the effects of mining throughout the economy are a direct result of the Project. First, the Project addressed the issue of tanzanite. The tanzanite boycott set off by unsubstantiated allegations of al-Qaida involvement in tanzanite trading in November 2001 caused a crash in the global market. By January of 2002 tanzanite prices were half to two-thirds what they had been six months earlier. The depression in the tanzanite mines and tourism caused widespread unemployment in northern Tanzania, particularly the Arusha area.

Project leaders cooperated with the American Gem Trade Association (representing wholesale gem dealers), the Jewelers of America Inc. (representing 11,000 retail jewelers), the Jewelers Vigilance Committee and the State Department to organize a Tanzanite Summit at the February 2002 Tucson Gem Show. The Minister and Permanent Secretary led the Tanzanian delegation, which included representatives of the South African owned formal tanzanite mine AFGEM and independent Tanzanian gem dealers and miners. They agreed on a set of procedures known as the Tucson Protocols, which ensure that tanzanite shipments are controlled and documented from mine to manufacturer to customer. Project personnel have followed through on both sides of the Atlantic as the implementation measures are put in place. The boycott by Tiffany's, QVC and others ended in direct response to the protocol implementation, and the report on it produced by project personnel.(Tracking Tanzanite, 2002) Tanzanite prices are now higher than they were before the scare. Tanzanite export values plunged from $800 per gram of AAA tanzanite before the boycott to about $200 in early 2002. In the first half of 2003 the price had returned to over $600 per gram. The most complete estimate of the value of the global market chain in tanzanite evaluated it at $400 million per year. Recovering half of that value has to be counted a major achievement.

Project personnel continued to follow the tanzanite issue and targeted interventions occurred after the Tucson Summit. The combined efforts of dealers, miners, the US industry, the government of Tanzania and the Project proved highly effective. Now, dealers provide a numbered dealer warranty with each shipment stating that they can prove that their sources and buyers are legally registered businesspeople and the proceeds of the sale are used only for legitimate purposes. The Ministry of Energy and Minerals stamps each numbered export permit with a similar warranty and seals the package. The Ministry, working with project personnel decided to create a Gemstone Board, on which stakeholders would be represented, to issue such certificates. The amendment to the mining law is now before parliament. When it passes, implementing regulations will be issued. Fencing of Block B at Merelani is partially implemented. This area is highly problematic from the safety, legal and political points of view. The 480 tiny plots (50m x 50m) have entwined underground tunnels, and the area has attracted thousands of hangers-on and unlicensed brokers, many of whom take rough gems illegally to Kenya. Those who lack legal claims and a few whose claims are shown by survey to lie within Block C have resisted the fencing process violently, so government is proceeding cautiously. Government installed a police post, schools and local authorities in Merelani, which was previously an unrecognized settlement, despite its population of about 50,000 people.

Project personnel continue to liaise with dealers in Merelani and around the world to ensure that they understand and use the documentation system. Project personnel produced a report entitled *Tracking Tanzanite*, which provides a history of the crisis and step-by-step procedures for implementing the Protocols, together with sample forms for use by dealers and customs authorities throughout the world. The Project's ability to respond to this crisis is a testament to USAID. A limited amount of money allowed a major policy impact that directly resulted in jobs and income for Tanzania.

The other major area of policy impact focuses on preserving a future for legal small mining. Tanzanians were in the process of being squeezed out of legal mining, as the number of large-scale prospecting licenses grew from 9 in 1997 to 500 in 2003. Few places were left where small-scale miners could file legal claims. The law requires companies to relinquish half of a prospecting license area when the claim expires or is renewed, together with documentation of any mineral deposits found there. In the past, relinquished areas were generally picked up by other international companies. The law is being changed to provide for the Ministry to designate portions of relinquished areas to be reserved for small-scale mining. Often the initial exploration geological reports are sufficient to identify surface deposits appropriate for small-scale mining that would be uneconomical for capital-intensive international companies. This reform is fundamental to preserving income opportunities for hundreds of thousands of small-scale miners and making it possible for them to operate legally.

The success of the pilot value-added activities program, the success around tanzanite and the future regulations ensuring claims for small scale miners certainly met and exceed project deliverables. More importantly, in combination, these successes ensure jobs and incomes to thousands of Tanzanians long after the project ended. Several of the large international mining companies recognize this fact. They have expressed an interest in working with IBI on upstream and downstream job creation as well as community development work. A Global Development Alliance proposal is being prepared to continue working toward sustainable mining-driven development in Tanzania.

Activity 4: Address environmental concerns

Figure 4 *Environmentally destructive alluvial mining can be replaced by fixed mining of prime deposits*

While international mining companies are now licensed and audited annually, artisanal mining has proven much more difficult to regulate. The project pilot tested approaches to improve environmental practices among artisanal and small-scale mining. The most successful environmental teachings have been in controlling water and air pollution from gold and gem processing. Miners have learned to build segregated pools, away from the rivers, instead of washing their gold and gems in the rivers themselves. Miners used to pan directly in streams like that at left. Separate landlocked pools like those shown below keep mercury, used in amalgamating the gold, out of the streams. It also reduces soil in streams and waterborne diseases. Using simple retorts to capture the mercury when it is burnt off of the amalgam is also catching on, keeping mercury out of the air, soil, and away from the bodies of people doing the processing. Since mercury is expensive, this lesson was fairly easy to spread.

The Project not only offered solutions but actually conducted trainings in best practices for 621 miners. This training was conducted by the Ministry of Energy and Minerals extension officers. Thus, the Projects impact not only addressed an immediate need but built sustainability into the capacity of Tanzanians to address the project in the future. The environmental component of the program was delivered to the same group of miners that were trained under Activity 3. Thus, the 621 miners are actually the claim holders. This means that roughly 10,000 miners and mine workers are now directly applying the Project's training on a regular basis.

Figure 5 *Small panning ponds isolate contaminants—closed retorques contain them better.*

The Project learned that the laws and regulations did not necessarily need to be changed in Tanzania. Instead, the Extension Officers simply lacked the training and skills to enforce the laws and regulations. By training these people, providing them with minimal transport and equipment, the Project allowed the environmental laws and regulations on the books in Tanzania to be spread. The major success of the Project in this area was realizing this fact and targeting our assistance to this critical need.

As with the value-added activities portion of the Project, the multinational mining companies clearly understand the benefits of environmentally friendly practices and the damage that mining can do. In addition, any environmental damage that small scale mining causes on the claims of large scale mining companies is their responsibility to clean up. Thus, the large mining companies support continued IBI efforts in this area under a future GDA proposal.

Economic Impact

The economic impact of this program on poverty alleviation far exceeds USAID's investment in the project ($1.6 m over 2.5 years). The 10,000 to 18,000 jobs on legal mining claims that the project assists produce an estimated US$22 to US$39 million per year in income ($10/d x 10,000 to 18,000 x 220d/yr). The 40,000 to 50,000 people working in related supplies and services recirculate most of that income quickly, so the multiplier effect is very strong. Their combined incomes can be estimated at an average of $6-7/d, which adds up to another US$52.8 m to US$77m contributed to the Tanzanian GDP—in rural areas among poor people.

The income from small-scale mining is spent and invested much more rapidly than government revenues, and most of it goes into rural areas and interior towns. This is why it is a good antidote to Dutch disease. Miners in our 1996-99 mining marketing study reported investing in small businesses such as taxis, dala-dalas, trucks, bicycles, guest houses, restaurants and improved farming/agribusiness equipment such as tractors, mills and oil presses. These investments are not as visible as the Mercedes that multiply in capital cities where mining thrives, but they are far healthier for the economy. Revenue from mining, for example, revived the cashew crop along the entire southern corridor inland from Mtwara. Transporters traveling to mining areas improved previously impracticable roads and some miners/traders used capital from mining to purchase the cashew crop. In previous years it had languished and trees had been neglected because there were no buyers. Beginning in 1997 gem dealers with capital from the mining rush in the Tunduru area bought the cashew crop. By the time we surveyed the area in 1998 tree owners were again tending their trees, weeding underneath and pruning appropriately. Cashew growing also involves about 500,000 Tanzanians, and the Mtwara corridor in southern Tanzania is a prime growing area.

Project Design

The project was designed to be implemented by Tanzanian institutions and individuals who have a continuing role in the sector, which, in addition to the government entities mentioned above, includes Tan Discovery, a leading local mining consulting firm, the Economic and Social Research Foundation (ESRF), a local think-tank, and the Tanzanian Chamber of Mines (TCM). The project provided top quality training, research, and limited additional program resources to enable them to implement shared goals. One project component worked with the Tanzania Revenue Authority (TRA), Ministry of Finance, Ministry of Energy and Minerals, and the Chamber of Mines (TCM) on tax and mining policy issues. The second funded the Economic and Social Research Foundation to propose a stakeholder plan for estimating and investing mining tax revenues for long-term development. The third sought economic diversification and income distribution, generating jobs and business opportunities in mining itself, and in upstream and downstream supplies, services and processing. The fourth was developing the materials and training structure for an extension program to make artisanal mining practice sounder, reducing negative environmental impacts.

Successful Approaches

Local management and project implementation, businesslike procedures, computerization, and focused dialog continue to be key approaches that make this project successful. In the policy arena it works by bringing a global perspective in support of local solutions implemented by Tanzanian authorities.

Local Management and Implementation

Local management and implementation has to be considered a major success of this project because it multiplied impacts and made them sustainable. The project had no full-time expatriate personnel in the field. Our Project Director is Tanzanian Godwin Nyelo, who worked 75% for IBI and the project and continued 25% with the Ministry of Energy and Minerals. He was assisted by Administrative Assistant Aziza Bukuku. Tan Discovery, ESRF and TCM had subcontracts to implement specific project components. By providing timely supplemental funding and resource persons with knowledge of best practices in a global framework, IBI empowered local institutions, allowing them to achieve shared goals.

Businesslike Procedures

Use of businesslike procedures proved to have strong impact. Paying for training is now an accepted approach, imitated by other programs. When we first suggested that gem-craft training and the subsequent business skills course be advertised and charge tuition, nearly all of our partners thought it would not work. Tanzania is flooded with donor-funded free training. We insisted that it be tried anyway. Everyone now agrees that the new approach works far better. The ads announcing trainings sent a message to the business community and political leaders that serious training was happening. Trainees expected a lot from the courses because they had paid for them.

Computerization has been another extraordinarily successful process. All of our partners have large quantities of manually produced and processed data. It had been computerized only at the final stages, to generate reports, often on an ad hoc basis. We assisted the Ministry of Energy and Minerals, the Chamber of Mines and the Tanzania Revenue Authority to develop websites that fully explain their operations and provide up-to-date data. We trained in-house personnel to develop and update websites rather than doing it ourselves, so that the process would be sustainable.

In project-year two our database/website trainer followed up with MEM, TCM and TRA in their individual offices on data presentation and website development. None of the partners had been able to work through ahead of time what data they wanted to include in the database and how to make it accessible to different categories of users. Our website specialist worked with each agency's staff over a two-week period in October 2003 to organize the actual data and the underlying data collection/entry procedures, ensure that the formulas and spreadsheet linkages were correct and email/website data access was established.

Constraints

By design this project was very ambitious and the work plan was frontloaded. The reason was that implementation inevitably encounters delays, so the more one plans to do quickly, the more will be done in the end. We requested a no-cost extension to allow TCM and ESRF to recover from their internal organizational problems and implement their project components, as well as to recoup overall delays occasioned by three travel bans (9/11, Gulf War and an al-Qaida cell threat). Both ESRF and TCM were able to complete the studies and workshops by project closing on December 31, 2003.

The project completed all of the originally planned activities by December 31, 2003, and in some areas accomplished much more than had been envisioned. The mining extension program had been planned as a pilot activity. In the end, we were able to extend it to most mining areas throughout the country. We also delivered more gem craft training than had originally been budgeted. Savings generated by having participants pay instead of having their costs covered during training were reinvested by Tan Discovery in support for additional training. Although we did fulfill the commitment to improve tax transparency with TRA through public information materials, one element left undone was a brochure on tax liabilities and how to settle them that we had planned to produce. TRA issued a summary sheet of tax rates, which covers similar ground and achieves the basic goal of informing taxpayers of their obligations. Since TRA proposed a new income tax law in 2003 and it was strongly contested by both taxpayers and other government departments, it was agreed between the project administrators and USAID that it would not be appropriate to draft a taxpayer's manual at this time.

IBI Results Reporting Compilation Sheet

Fiscal Years 2002-2003

Project Policy Improvements

PMP Achievements
Mining Policy
1. Mining Claim Regulations submitted for Parliamentary Approval
2. Tanzanite Protocols Implementation

- Dealers' warranties being provided since August 2002
- Export warranty by MEM being provided since August 2002
- Gemstone Board being created
- Certificates of origin to be issued by Gemstone Board
- Amendments to the Mining Law
- Merelani Block B being fenced

36 meetings, workshops, discussions and roundtables yielded these policy revisions to assist the mining sector.

Tax Policy

1. TRA and MEM removed export taxes on minerals and adjusted royalties, attracting more of the artisanal gem production to legal channels of sale through Tanzania.
2. TRA and MEM are moving gradually toward requiring gemstone cutting to be done in Tanzania, reducing rough exports. A sudden move, as originally proposed, would have disrupted gem trading and mining, because the skills were not yet in place to cut all gemstones.

Value Added Projects

NB: All of the results below are as of October 2003. Results of the final quarter's activities will be measurable in early 2004 after the project has closed.

PMP Achievements
12 totally new SMEs created in the jewelry making or cabochon industry
24 to 48 people employed fulltime in new industry as of fall 2003
218% increase in employment
100% utilization in training skills
81% of trainees reporting benefits

Definitions
Average farming wage in Tanzania = $1 per day
Average wage for jewelry making jobs = $2-$6 per day

20 days in a month fulltime work
10 days in a month part-time work
12 months in a year

Economic Impact
Low Range Estimate

$5,760 generated by value added activities ($2 per day times 10 days in a month times 24 people times 12 months equals $5,760)

Middle Range Estimates

$8,640 generated by value added activities ($4 per day times 10 days in a month times 36 people times 6 months equals $8,640)

$17,280 generated by value added activities ($4 per day times 10 days in a month times 36 people times 12 months equals $17,280)

High Range Estimate

$34,560 generated by value added activities ($6 per day times 20 days in a month times 48 people times 6 months equals $34,560)

$69,120 generated by value added activities ($6 per day times 20 days in a month times 48 people times 12 months equals $69,120)

Small Scale Mining Project

PMP Achievements
206 new SMEs created in small scale mining industry
3,090 to 18,540 direct small scale mining jobs created with project assistance
14 new SMEs created that directly support the mining industry
28 to 70 new jobs created that directly support the mining industry
621 small scale miners trained in environmentally friendly practices and safer mining techniques
52% of small scale miners report benefits from the new skills learned under the projects training program

Definitions
SME in mining industry is the holder of a Primary Mining License (PML)
1 PML contains 1 to 6 mining pits
1 Mine Pit employs at minimum 15 miners
Average farming wage in Tanzania = $1 per day
Average wage for small scale miners = $10 per day
20 days in a month fulltime work
10 days in a month part-time work

Economic Impact – Wages Paid to Small Scale Miners
Estimates per month of wages of small scale miners working part time
$309,000 wages paid to small scale miners ($10 per day times 10 days in a month times 3,090 people times 1 month equals $309,000)

$927,000 wages paid to small scale miners ($10 per day times 10 days in a month times 9,270 people times 1 month times equals $927,000)

$1,854,000 wages paid to small scale miners ($10 per day times 10 days in a month times 18,540 people times 1 month equals $1,854,000)

Estimates per month of small scale miners working fulltime
$618,000 wages paid to small scale miners ($10 per day times 20 days in a month times 3,090 people times 1 month equals $618,000)

$1,854,000 wages paid to small-scale miners ($10 per day times 20 days in a month times 9,270 people times 1 month equals $1,854,000)

$3,708,000 wages paid to small-scale miners ($10 per day times 20 days in a month times 18,540 people times 1 month equals $3,708,000)

Economic Impact Estimates for 6 months
Part time
$5,562,000 medium impact
$11,124,000 high impact

Economic Impact Estimates for 12 months
Fulltime
$22,248,000 medium impact
$44,496,000 high impact

USAID'S Return on Investment for the IBI Tanzania Tax and Mining Policy Project

TTMP Project Budget	$1,629,987 = $815,000/year
Medium Estimate Value Added	$207,360/year
Medium Mining Wages of Improved mines	$22,248,000/year

$23 m in sustainable incomes generated through Project activities – Medium Estimate = 14.375 to 1 or a 1437.5% return on USAID's Investment

ATTACHMENT 1

TRAINING COURSE REPORT

CONDUCTED BY FRATERNITY .F. NDHLELA
FOR INTERNATIONAL BUSINESS INITIATIVES

USAID TAX AND MINING POLICY PROJECT

MINE ACCOUNTING AND MINE TAXATION TRAINING OF TANZANIA REVENUE AUTHORITY STAFF

VENUE: EASTERN AND SOUTHERN AFRICAN MANAGEMENT INSTITUTE
ARUSHA
TANZANIA
1-11 DECEMBER 2003

TRAINING OF TANZANIA REVENUE AUTHORITY (TRA) STAFF

COURSE: MINE ACCOUNTING AND MINE TAXATION

Period of training: 1 - 11 December 2003

Trainer: Fraternity Fanyana Ndhlela (Mine Accounting and Mine taxation consultant)

OBJECTIVE:

The objective is to acquaint the TRA *staff with* necessary skills that will enable them to understand mine accounting and mine taxation

TRAINING OUTLINE

The following areas were covered:

1. International Accounting Standards
- Definitions
- Explanations
- Application

2. Mine accounting
- Cost elements
- Cost structures
- Financial accounting
- Cost accounting
- Revenue recognition

3. Mine Processes
- Process chart *(from* mining to refining stage)
- Production trends

4. Annual Reports of Mining Companies
- Mining terminology
- Interpretation of the Balance sheet

- Interpretation of the Income statement
- Interpretation of the changes in equity
- Interpretation of the cash flow
- Understanding the notes to the accounts
- Understanding the accounting policies applied to the accounts
- Analysis of annual reports for mining companies
- Tax computations for mining companies
- Group case studies

5. Tax Computation for Mining Companies
- Cases studies and group presentations in class
- Allowable/ disallowable per tax act

6. Auditing Mine Accounts
- Price transfer case studies
- Related theory to price transfer

7. Tax Audits
- Field audit principles and techniques
- Desk audit principles and techniques
- Preparations for tax audit

8. Penalties and Negotiations
- Negotiating skills
- Penalties per tax Act

9. Comprehensive Case Studies Covering Everything learnt in class
- Group cases and presentation in class

COURSE EVALUATION BY TRAINER

1. SELECTION OF CANDIDATES

Candidates for the course were well chosen, country wide, to represent a wide geographical area and high level of TRA staff. A total of 26 candidates were trained and given certificates of attendance at the end of the course.

2. MEETING OBJECTIVES FOR THE COURSE

The course objectives were met and this is demonstrated by the comments generally made by participants when they evaluated the course. The case studies that were done on the last 2 days of the course showed that the candidates had received some understanding of the course contents.

3. CANDIDATES PARTICIPATION

There was high level of participation by the candidates. Willingness to learn was high. Ground rules for increased participation were observed.

4. GROUP WORK

Group work was carried out to my expectation and presentations in class were good. Mining terminology was appreciated and repeatedly used during presentations. This part of the course generated a lot of interest and discussion.

5. SOME OBSERVATIONS

The general feeling of the candidates was that TRA had not yet reached adequate levels of tax collection in the mining industry in Tanzania. TRA was not sure on the way forward towards tapping some tax revenue from small scale miners who were now increasing in number.

6. RECOMMENDATIONS

I recommend that TRA staff be afforded opportunities to visit various mines and familiarise themselves with the processes. This aspect will bring them closer to the operations and facilitate improvements in mining tax computations. This also could lead to revenue collection in the positive direction.

A similar training needs to be conducted in the mining sector, if resources permit, with a view to bringing TRA and mine accountants at the same level of understanding on common issues, thus, mine tax computations.

The second level of TRA staff , next to the group that was trained, needs to be trained in mine tax computations. It is therefore expected that the candidates that were trained need to train their subordinates or further resource could be obtained to conduct similar training.

Mine taxation, in the draft income tax Act, is treated like any other company or corporation in the business industry. It would be preferable to have a section that deals with issues relating to mine taxation.

FRATERNITY FANYANA NDHLELA
(Mine accounting and Mine taxation consultant)
e-mail : fndhlela@bnc.co.zw
Telephone 263-4-305729

13 December 2003

ATTACHMENT 2

Economic and Social Research Foundation

Mining Revenue Projections and Investment Strategy

Second draft

November 2003

TABLE OF CONTENTS

1.0 INTRODUCTION

Tanzania is richly endowed with a wealth of minerals, which include: gold, copper, zinc, diamonds and tanzanite. Historically, the record of production of minerals in Tanzania is not very impressive, as far as the contribution to gross domestic product is concerned. During the early 1960s, the contribution of mining sector averaged 3 – 4% of GDP, and the main mineral products were diamonds, gold, salt and tin. The mining sector was nationalized in 1968 and the State Mining Company given monopoly control. Unfortunately it did not yet have the expertise and capital needed to develop the sector. A decline in the production of all minerals ensued, including diamonds from Williamson Diamond Mines Ltd (WDL). The contribution of mining to GDP fell to only 1.1% by 1988.[1]

The Economic reforms of the late 1980s and the removal of currency controls resulted in significant changes in the mining sector in Tanzania. Notably, Tanzanians were given the right to peg mining claims and to buy and sell minerals as licensed dealers. Mining quickly became a source of income for more than five hundred thousand small prospectors and a source of foreign exchange for private-sector import-exporters.

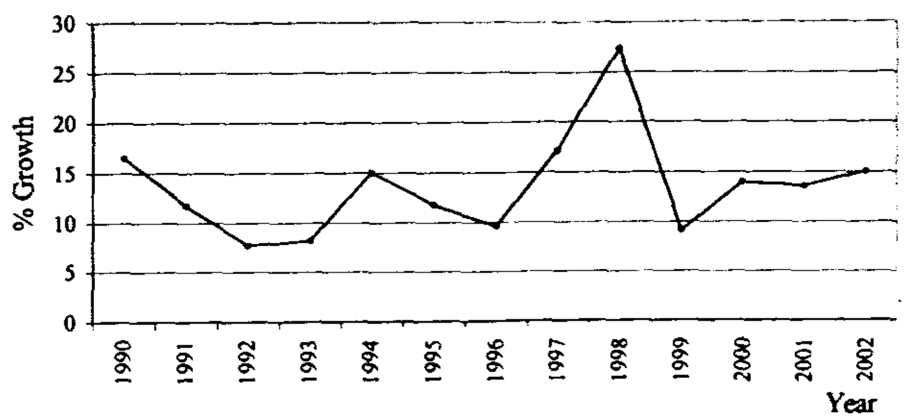
Following the economic reforms and subsequent liberalization of the mining sector in Tanzania, the sector has been experiencing a boom led by international mining companies. During the late 1990s, Tanzania has been receiving large capital inflows going into the mining sector. Since 1998, large international mining companies have invested a total of US$ 950 million in mining sector in form of foreign direct investment (FDI). The major gold mining establishments include: Kahama Mining Corporation Ltd[2], Geita Gold Mines Ltd[3], Afrika Mashariki Gold Mines Ltd., and Golden Pride Project (also known as Resolute Tanzania Ltd.). The largest gem mining companies are Williamson Diamonds Mining Ltd and Africa Gem Resources (AFGEM)[4]. Alongside these large establishments, the small-scale and artisanal miners risk being squeezed out by the greater capital leveraged by international companies and more efficient technology. The Tanzania business community and government officials have expressed a strong interest in managing the co-existence of large and small mining sector so that they generate jobs, transfer technology and lead to balanced sustainable growth.

[1] Between 1960s and 1980s, diamond production from WDL accounted for more than 70% of mineral production in Tanzania (see URT, 1996)
[2] Based at Bulyanhulu owned by Canadian gold producer, Barrick – The world's biggest gold company.
[3] Geita is believed to be one of the world's most profitable gold mines and is shared by South Africa's Anglogold and London-based Ashanti Goldfields.
[4] Located at Mererani in Arusha – The only Tanzanite Producer in the world.

One important benefit of large mining relates to the collection of government revenue from mining. Investments by large mining companies in Tanzania have substantially formalized the mining sector. This has important fiscal implications. It is much easier for the government to collect taxes and fees from the large registered establishments than would be the case with small and informal miners. Moreover, mining companies spend significant amounts of money in community development projects in the mining localities. Expenditures on infrastructure, health, education and water projects are directly beneficial to the communities neighboring the mining establishments.

Since early 1990s, the mining sector has been the fastest growing sector in the Tanzanian economy – a positive response following economic reforms and liberalization of the mining sector. Growth of the sector has consistently remained higher than the growth rate of overall GDP in real teams. Generally, Tanzania mining sector has been growing at an average rate of 13 percent, and the overall trend shows that it never dropped below 7 percent since 1990. As shown in chart 1 below, the growth of the sector peaked in 1998 to about 27 percent, mainly resulting from huge capital injections by the large mining companies in the major gold mining companies.

Chart 1: Growth of mining sector in Tanzania 1990 - 2002



Source: URT, 2003

2.0 TANZANIA MINING POLICY AND MINING REVENUES

2.1 Key Issues and Provisions in the Policy

The ongoing reforms in Tanzania have resulted in major improvements in the mining sector. New policy emphasis by the government has largely been on regulation and promotion of the mining industry rather than direct involvement in the exploration and exportation of the minerals. Following these measures, private companies have taken the lead in operating, managing and owning mineral enterprises in Tanzania. The government has reoriented its objectives towards the creation of a business friendly environment and efficient collection of revenues from the companies involved in the mining activities. This shift of policy objectives has resulted in the investment boom in the mining sector in Tanzania over the past decade.

The government's principal objective, according to the mineral sector policy (1997), is to develop the mineral sector and increase its contribution to the economy. The long-term development perspective is to increase the mineral sector's contribution to the economy to about 10 percent of GDP by the year 2025. In promoting the exploration, development, production and utilization of mineral resources in Tanzania, several sectoral objectives have been set by the government, which include: raising the contribution of the mineral sector to the GDP; increasing government revenue from the mining activities; creating gainful and secure employment in the mineral sector, generating alternative sources of income for the rural population, and maximizing value added in minerals before exportation. A number of strategies and policy directions have been set in order to achieve the specified sectoral objectives.

Broadly, the mineral policy of 1997 recognizes the importance of sound economic and fiscal policies in shaping and influencing the mining sector, especially large mining where investments are very long term. At sectoral level therefore, the policy points to the economic policy that is competitive and geared to enabling the mining sector to maximize the tax revenues over a long term (i.e. 10-20 years). Maximizing revenue over the long term requires policies that promote investment in new mines on one hand and efficiently tax the existing ones on the other. The policy also points to the need for an effective tax regime to reconcile the objectives of the government with those of mining investors. The aim is to minimize the government's financial risks and outlays and encourage the maximum flow of new mining investments consistent with the economy's capacity of growth. Also, an effective mineral tax regime would enable the government to accrue a fair share of the rent generated by mining activities, thereby securing a sustained flow of foreign exchange earnings and state revenues. The mineral sector policy then sets a number of strategies for the mining sector tax regime, with emphasis on compliance, transparency, and clarity.

The issue of increasing government revenues from the mining activities is clearly spelt out in the sectoral objectives of the policy. Detailed strategies have been set in the policy, covering important issues that would ensure the efficient revenue collection from the sector, while at the same time promoting development in the sector itself. However, there are no detailed strategies on the utilization of the revenues from the mining sector. On this issue of revenues from the sector, the fiscal strategies outlined in the policy have largely focused on achieving sustainable development of the mining sector activities.

2.2 Need for a mineral revenue investment strategy

The fact that minerals are depletable resources necessitates a step beyond the view of development in the mining sector alone. The link that the mining sector has with the rest of the economy and the benefits to the economy resulting from the expanding mining activities is widely recognized. However, there is a need to set implementable strategies to ensure that the loss of natural capital associated with exploitation of mineral resources is translated into sustainable increase in the country's diversified economic growth. On the part of the government, this amounts to identifying proper investment options for the revenues from the mining sector, for sustainable and equitable development.

Customarily not all expenditures or decisions by the government to use its revenues for particular public investments are dependent on the particular source of revenue. Conventionally, the government collects revenues from various sources – tax or non-tax, and uses the revenues according to the priorities set in the government's investment and operating budgets, irrespective of source. Therefore, at this point, it would be reasonable to ask ourselves: why should the government worry about mining revenue? Is not revenue from mining not just like government revenue from any other source? Answers to these questions provide a rationale for this study.

Given the nature of the mining industry, which extracts wealth from nonrenewable resource, the long-term economic and social costs may completely outweigh these benefits to the communities, and to the economy as a whole. The government therefore, has the responsibility to ensure that the revenues from this sector are efficiently utilized for long-term sustainable development. Moreover, the sudden influx of investment and rapid growth of industrial mining is expected to generate a rapid increase in government revenues. There is a risk that the revenue increases may be misspent on disparate demands unless a coherent long-term investment strategy is agreed upon.

The mainstay of this study is the recognition of the fact that mining involves the exploitation of nonrenewable resources. It is a sector whose activities involve the depletion of natural capital, which once extracted is gone. Thus, it is important that the revenues from the sector are used wisely to translate this wealth into sustainable increase in the country's capital stock for the development of current and future generations.

The objective of this study therefore is to propose a strategy for investing the revenues from the mining activities, with view to attaining sustainable mining and economic development in general. It is meant to identify investment options for long-term increase in the country's capital, so as to avoid the popular "Dutch disease". This study involved an exercise of forecasting mining tax revenue from the major mining establishments in Tanzania. Projection exercise was done using a tax-forecasting model developed by fiscal experts.

3.0 BENEFITS AND COSTS OF THE MINING SECTOR

3.1 Benefits of Mining Sector to the Tanzanian Economy

3.1.1 Contribution to the Economy and Community Development

Benefits of the mining sector could be viewed from two wide angles – benefits to the entire economy, which is essentially related to the macroeconomic aspects; and benefits to the local communities where the mining activities are undertaken. The macroeconomic benefits include: the overall contribution of the mining sector to the economy, the contribution of mineral exports to export performance, and government revenues from the mining sector in form of taxes and fees.

One important benefit of the mining sector in Tanzania stems from the contribution of mineral exports in the country's export earnings. Table 1 below presents mineral exports by formal gold and gem mining companies[5] as a percentage of Tanzania's total exports from1999 to 2002.

Table 1: Exports of selected minerals and Tanzania's exports; 1999 – 2002

Year	1999	2000	2001	2002
Large Mining Company Exports Value (Million US$)	39.05	120.39	267.35	353.7
Tanzania's Total Exports (Million US$ fob)	543.3	663.2	776.4	877.4
Large Mining Exports, Percentage of Total Exports	7.2%	18.2%	34.4%	40.3%

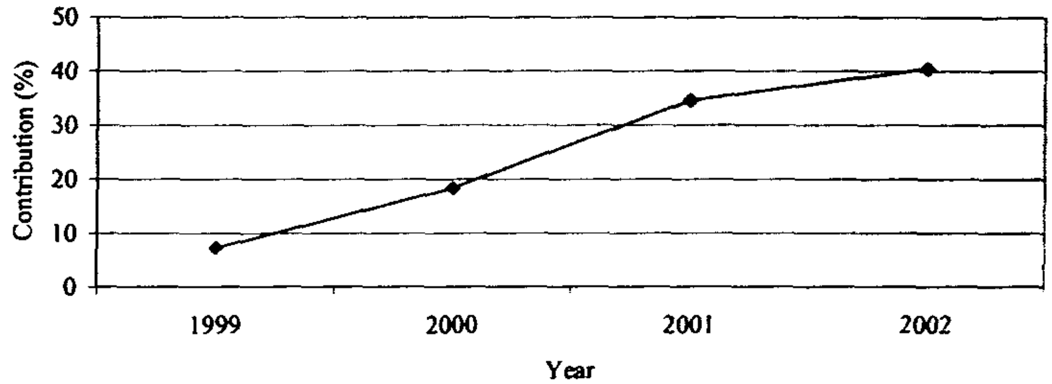
Source: Ministry of Energy and Minerals
URT, Economic Survey

As indicated in Table 1 above, the share of gold and gem exports by large companies in the total exports has been quite significant since 1999. As large gold mines entered their initial phase of production by the year 2000, mineral exports increased nearly tenfold in the next three years. Chart 2 shows the trend of contribution of mineral exports to total exports since 1999.

[5] Figures are aggregation of the exports by the large gold mines, together with reported figures for exports of Tanzanite and Diamonds by AFGEM and WDL respectively.

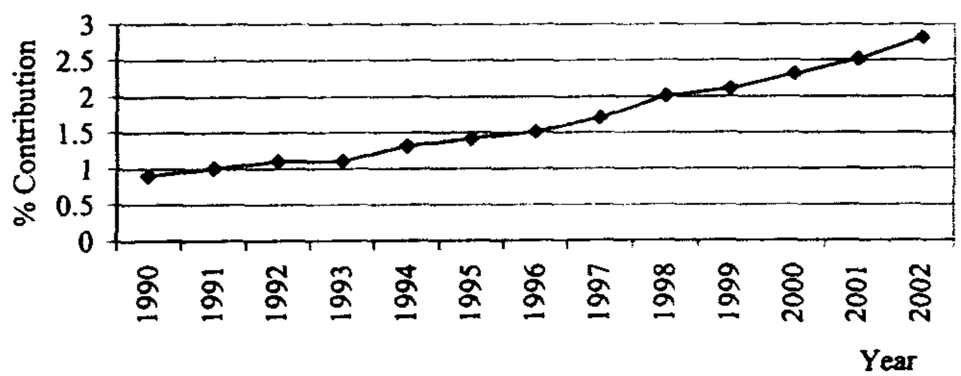
3

Chart 2: Contribution of Mineral Exports to total export Earnings



Another important aspect is that the contribution of *mining sector to* GDP *in* Tanzania has been rising consistently since 1990.[6] Initially the rise came mainly from small-scale mining production marketed through licensed dealers. Beginning in 1999, the huge inflow of foreign capital into the sector for exploration since 1995 began to produce an increasing impact on GDP. Chart 3 below shows the trend of contribution of *mining sector to* GDP from 1990. It is important to note that the contribution of small-scale mining is significantly underestimated, as only official exports were taken into account. Surveys conducted in the mid and late1990s suggested that the majority of small-scale mining exports were unrecorded. They nevertheless contributed substantially to GDP.

Chart 3: *Contribution of formal mining to overall* GDP



Source: URT, 2003

[6] Although the contribution remains well below 3% to-date, the Government of Tanzania targets to raise the contribution of mining sector to about 10% of GDP for the next 25 to 30 years.

There are reasons to believe that the upward and consistent trend depicted in chart 3 will be sustained at least for some years to come. Large mining investment projects are still at very early stages of operation. Furthermore, with the ongoing reforms in the country and the subsequent improvement in the investment climate, there is a potential for more private investments in the sector, more discoveries and subsequent increase in mineral production. There is also a possibility that the major deposits have already been located and estimated reserves will increase only modestly in the future. Mining exploration methods have become far more sophisticated in the last few years, and mining companies are focusing their efforts on a few economically viable deposits. If the world market price of gold remains high, more deposits are viable, and a larger portion of known deposits will be mined. If the gold price falls, companies will mine less of each deposit, as the cost of production rises with the depth of the mine.

Another benefit to the economy following the expansion of mining sector is community development in the respective local communities. Large mining companies are spending on community development related projects, including: education, infrastructure, health and water projects. These constitute immediate benefits to the communities in the mining localities. These expenditures are important in supporting the community's efforts to fight poverty at local levels. Table 2 below shows expenditures on community development related areas by large mining companies.

Table 2: Expenditures on Community Development: Selected Mining Operations (US $)

	1999	2000	2001	2002	Total
Education	61,431	196,926	338,886	435,197	**1,032,440**
Health	27,264	242,905	1,032,583	271,000	**1,573,752**
Water	2,054,866	3,307,440	1,306,420	120,494	**6,789,220**
Roads	2,015,193	3,255,230	807,157	351,762	**6,429,342**
Micro finance Schemes		46,133		39,668	**85,801**
Others[a]		1,023,720	161,999	272,267	**1,457,986**
Total	**4,158,754**	**8,072,354**	**3,647,045**	**1,490,388**	**17,368,541**

[a] Include expenditures on such items like: electricity, youth and HIV/AIDS programs.

Source: Ministry of Minerals and Energy.

As shown in the above table, the areas in which mining companies have directed the resources are key in fighting poverty in the respective communities. While these are direct benefits to the communities, perhaps the most important component is the indirect benefits, which result from the expansion of mining activities in these localities. A recent study found that the liberalization of mining and subsequent expansion in mining activities in Tanzania has brought poverty alleviation to rural areas in the 1990s on a scale far surpassing the impact of donor-funded job-creation efforts.[7] Secondary business opportunities have been important in job creation in the vicinity of both large and artisanal mines. Miners and supporting communities need temporary lodging, restaurants, equipment and supplies provisioning, transportation, healthcare and other services. The fieldwork conducted in 1999 in Southern Tanzania showed that hundreds of such businesses had been created by the recent mining boom, and that most had survived its downstream. Besides, a recent study by Tan Discovery found that the multiplier effect of mining activities is high, and on average, one job in the large mines creates up to five more jobs mainly though secondary business establishments.

Also, there are other expenditures by the mining establishments, which may be wrongly perceived to have only internal benefits to the projects, while they may actually have significant positive impacts to the community. One common item in this category is the training of workers, which forms part of human resource development by the mining projects. Normally, training is meant to enhance the capacity of the mining workers and, therefore, improve their productivity. Training may range from professional levels to lower cadres, bettering the performance of managers, engineers, information analysts, accountants, clerks, guards, etc. The spillovers resulting from this kind of human resource development to the society, is quite significant though its magnitude cannot be quantified. Besides, this is a form of human capital, some of which would last even after the closure of the mining project itself.

The available information show that, since 1997, the major mining establishment have spent more than US$ 7 million in human resource development. Table 3 below shows the number of people trained and total amount spent for training by the major mining projects since 1997.

Table 3: Human Resource Development by the major mining establishments: 1997 - 2002

Year	**Total number of People Trained**	**Total Amount Spent (US$)**
1997	173	27,095
1998	20	1,235
1999	1,370	35,111
2000	1,869	2,359,801
2001	1,907	2,376,000
2002	2,130	2,391,761
Total	**7,469**	**7,191,003**

[7] See Philips et. all, 2001.

Source: Ministry of Minerals and Energy, Dar es Salaam.

3.1.2 *Government Revenues from the Mining Activities*

Private investment in mining activities, as in other natural resources, involves the government's transfer of the property right to use public resources. In this case, the government transfers the right to mine an area in exchange for some amount of economic rent. The economic rents from natural resources are commonly known as 'resource rents' since they are derived from natural resources. Resource rents in the case of mining encompass all direct revenues to the government – taxes and fees from the mining activities. These taxes and fees are paid to the government for the use and development of nation's resources. Other types of resource rents that are associated with mining projects are (1) landowner compensation and (2) national/local equity participation in resource development.[8]

The basic income constituents – taxes and fees to the government from the mining activities Include:

- Royalties
- Income taxes
- Dividend withholding taxes
- VAT[9] / Sales taxes
- Import Duties
- Land taxes and lease rentals

Rates for these taxes are usually established by Central Government. As a general rule, albeit with some major exceptions, the majority of direct taxes accrue to the national treasury. Some fees also accrue tolocal government authorities. Table 4 below shows the revenues to the government from the major mines since 1998.

Table 4. Government Revenue from the Major Mines, 1998 – 2002 (In US$)

Payment	1998	1999	2000	2001	2002
Paye - Exp. Salaries	331,726	342,863	3,427,180	1,673,437	6,770,045
Payroll Levy-Exp.	38,766	38,532	454,676	257,985	410,809
Paye-Exp. Gratuity				277,129	551,992
Withholding Tax- Minesite	103,459	353,493	5,785,560	5,462,412	5,545,412
Withholding Tax- Dar			102,065	77,652	44,103
Payroll Levy	25,000	123,719	241,558	686,160	1,009,426

[8] In this case, the government, and occasionally at the local level, becomes an actual partner in a project, thereby acquiring a percentage of profits in addition to taxes and fees. Since the equity partner is normally the government or its agent, the majority of revenues from profit sharing accrue to the national government.

[9] In Tanzania, since mineral products are meant for export, the mining companies receive VAT refund from the revenue authority for exports. They pay VAT on local purchases and some imports.

Veta Levy	120,454	226,292	377,001	350,066	326,044
NSSF	274,239	519,891	1,102,515	1,027,327	2,075,588
PPF			4,212		
PAYE	489,522	1,050,623	1,421,202	6,294,386	3,726,728
Stamp Duty	2,063	2,237	114,403	152,945	200,695
Donations	51,332	60,391	178,324	138,718	228,903
Road Toll		200,000	440,591	460,564	683,946
Mining Lease	71,000	150,000	307,000	314,000	351,946
Royalty	474,892	1,246,819	4,611,575	6,991,321	10,833,359
Import Duty	199,540	201,027	532,566	1,052,649	2,565,611
Others		366,583	610,261	337,707	910,707
Total	**2,181,993**	**4,882,470**	**19,710,689**	**25,554,458**	**36,235,314**

Source: Ministry of Energy and Minerals.

As indicated in Table 4 above, government revenues from the major mining operations in Tanzania have been increasing consistently since 1997. As would be expected, since the major mining projects are at very early stages of operation,[10] royalties form the large part of revenue to the government. Actual revenue to the government from these operations was just about 0.3 percent of the total domestic revenue collection from 1998 to 2001. In the year 2002, the contribution of mining revenue rose modestly to about 1 percent of total domestic revenue. As the major mining companies advance to their full swing operation, the revenue to the government is expected to rise significantly in the future. The next section presents projection of revenues to the government from the major mining operations, mainly gold mines.

3.2 Costs and Risks of Mining

3.2.1 Possible Costs of Mining to the Economy as a whole (Macro – level)

Generally speaking, natural resources are an important source of national wealth around the world. Yet, experience shows that natural riches are neither necessary nor sufficient for economic prosperity and progress. It is evident that some of the world's rich countries such as Japan, Hong Kong, and Switzerland, do not owe their national wealth to natural resources. Even in other economically strong countries whose economic successes partly derived from the Mother Nature – like the United States and the United Kingdom, natural resources nowadays play only a minor role in the generation of national income.

The most common link between natural resources and economic growth is the possibility of 'Dutch disease'. Traditionally, the term 'Dutch disease' refers to the adverse effect of natural

[10] The companies have not yet recovered their capital expenditure, and therefore have not started paying corporate profit tax to the government.

resource discoveries on other productive sectors, especially farming and manufacturing.[11] A natural resource boom and the associated surge in raw-material exports can drive up the real exchange rate of the currency, thus possibly reducing agricultural, manufacturing, and service exports. Several studies that have analyzed the negative effects of resource abundance in the framework of the endogenous growth model[12] are mainly based on the premise that productivity growth is generated through Learning-by-doing in the tradable manufacturing sector. In addition to driving up the value of the currency, they have found that resources (mainly labour) tend to shift from other productive sectors of the economy (including agriculture) to the booming mining sector where returns (private returns) are high.

A recent study commissioned by the International Monetary Fund (IMF) found that poor people in developing countries rich in natural resources actually fared worse than the poor in less well-endowed countries. The wealth generated by minerals tended to be concentrated in few hands and used for private benefit rather than public good. Often struggles for power resulted, sometimes degenerating into civil war.

Among developing countries, natural resources generate a relatively higher proportion of GDP than in industrialized countries. This may to some extent reflect their underdevelopment: the modest size of the modern sector of the economy makes agriculture and other natural-resource-based economic activity relatively more important. But there are also clear examples of countries that are genuinely rich in terms of natural resources but still have not been able to sustain economic growth. It thus appears that the generosity of nature may sometimes – although by no means always – turn out to be a mixed blessing.

Good examples could be Botswana and Sierra Leone, both of which produce diamonds for export. By and large, Botswana has managed the revenue and rent stream from its main natural resource in ways that have contributed to impressive economic growth and widely distributed benefits. In fact, Botswana enjoyed the world's highest recorded rate of growth of gross national product (GNP) per capita from 1965 to 1998, even if it slowed down after 1990. Meanwhile, Sierra Leone has remained mired in poverty, ravaged by crippling internal warfare as local warlords have continued to fight for control over the diamond trade. Sierra Leone was the world's poorest country in 1998 according to the World Bank (2000). Apparently, the rich supply of diamonds has turned out to be a source of domestic strife that has both diverted precious national resources towards rent seeking of the most destructive kind and destroyed the infrastructure and social institutions that are so important for

[11] The Handbook of Development Economics defines Dutch disease as "The de-industrialization of a nation's economy that occurs when the discovery of a natural resource raises the value of that nation's currency, making manufactured goods less competitive with other nations, increasing imports and decreasing exports."
[12] See for example Gylfason et. al (1999), Herbertsson et. al (1999)

economic life. The experience in these two countries shows that the existence of natural resources could be both a blessing and a curse to economic growth and development.

It may seem paradoxical that a 'gift' from nature of abundant oil, gold, or gemstones tends to cause economic distress. Yet, studies have found that resource-dependent economies grow more slowly than resource-poor economies.[13] A recent report by the World Bank, for example, looked at the economic performance in the 1990s of countries that had large mining sectors.3 It found that in countries with medium-sized mining sectors (between 6 and 15 percent of all exports) GDP per capita fell at an average rate of 0.7 percent a year over the course of the decade. In countries with large mining sectors (between 15 and 50 percent of exports), GDP per capita dropped by an average of 1.1 percent a year, while in countries with very large mining sectors (over 50 percent of exports) GDP per capita dropped by a remarkable 2.3 percent a year. [14] Collectively these mining states saw their GDP per capita fall at 1.15 percent a year – a drop over the course of the decade of almost 11 percent (See World Bank 2002; Ross, 2002).

Gylfason and Zoega (2001) propose a new linkage between natural resources and economic growth, indicating that the connection exists mainly through savings and investment. When the share of output that accrues to the owners of natural resources rises, the demand for capital falls and this leads to lower interest rates and less rapid growth. Using data from 85 countries in their empirical work, Gylfason and Zoega found that, natural capital might on average crowd out physical as well as human capital, thereby inhibiting economic growth. Also, they found that across countries, heavy dependency on natural resources may hurt saving and investment indirectly by slowing down the development of financial system.

Another concern is the impact of mineral wealth on poverty. A country's reliance on mineral and oil exports tends to create typically high poverty rates. One reason for this pattern is that resource-rich governments do an unusually poor job of providing education and health care for their citizens. One study found a strong correlation between greater dependence on oil and mineral exports and higher child mortality rates: for each increase in minerals dependence of five points, the mortality rate for children under the age of five rose by 12.7 per thousand; for each five point increase in oil dependence, the under-five mortality rate rose by 3.8 per thousand.[15]

This pattern of worsening economic growth and increasing poverty is worrisome. It also has consequences for a state's susceptibility to violent conflict. The greater a country's poverty,

[13] See Sachs and Warner 2001; Manzano and Rigobon 2001; Leite and Weidemann 1999.
[14] Note that Minerals account for a significant portion of Tanzania's exports
[15] See Ross (2001)

the more likely it is to face a civil war. Not surprisingly, people are more likely to rise up against their government when their economic predicament is bad and getting worse[16] (World Bank 2002). Poor management of resources from the natural sectors – such as mining – coupled with unequal sharing of benefits from these sectors, can deteriorate into conflict between local and national authorities, ethnic groups, or military and civilians. In extreme cases, it sometimes even fosters civil wars. In the end, civil unrest can more than wipe out the benefits of the mineral wealth.

Another problem of resource dependency comes from the volatility of resource revenues. For the last century, the international prices for primary commodities – including oil and minerals – have been more volatile than the prices for manufactured goods.[17] Since 1970, this volatility has grown worse. This means that when countries become more dependent on oil and minerals exports, they also become more vulnerable to economic shocks. Studies show that revenue shocks tend to promote corruption, weaken state institutions, and create a host of budget and management problems. In theory, governments should be able to buffer their economies against these market shocks by setting up stabilization funds[18], and perhaps, savings funds. Yet in practice, these funds are often poorly managed and may wind up doing more harm than good.[19]

There has been a concern that these countries do not use the wealth from the natural resources such as minerals, for the benefit of the economy and the population as a whole. Some observers have pointed out that, mineral revenues in the mineral rich countries in most cases end in the wrong hands, and are therefore misused. In some extreme cases, there are concerns about the mineral revenues being captured by rebel groups and be used to finance civil war. It has sometimes been pointed out that benefits from the mineral revenues do not reach the poor especially in the areas nearest the operations. And, in the other extreme case, closely linked to governance, some analysts have argued that mineral revenues corrupt politicians and government officials.[20]

3.2.2 Possible Impact of Mining Revenues on the National Economy

The revenue generated through the exploitation of mineral resources can be substantial and act as a powerful catalyst for development. However, it also has the potential to increase

[16] See World Bank (2002)
[17] See Grilli and Yang (1988)
[18] In the case of mining, the common practice is the establishment of Nonrenewable Resource Funds (NRFs), which is used to save a proportion of resource revenues mainly for two purposes: (1) as a control on government spending of windfalls, and (2) as a means to smooth out price fluctuations.
[19] See Ascher (1999); Davis et al. (2001).

dependence, cause inflation and distort the national economy. These negative impacts are also a result of "Dutch disease". The genesis and development of this condition, which eventually pervades and deteriorates the whole economy, can be summarized in the following stylized facts:

The cycle starts when the mineral sector undergoes a rapid development or boom, either through new resource discovery and new mining projects, or through increases in international mineral prices, or both. Because the mineral sector has few backward or forward linkages to other industries, the main impact of the boom is transmitted to the economy through the increase in export revenue and the resulting inflow of foreign exchange.

As this revenue flow increases, the exchange rate tends to appreciate and money supply grows. This leads to increased imports and to higher prices in the non-tradeables sector. In the tradeables sector - mainly agriculture and manufactures - both income and profits decrease because of loss of competitiveness and higher domestic costs.

Government income benefits from the boom, either directly through State ownership or through the taxation of mining and processing enterprises. This fiscal linkage - the capture of mineral resource revenues and their subsequent redistribution by central government - reinforces the effect of the boom. The government will be under pressure to increase both current expenditure and investment, and possibly to lower taxes and the prices of public services. The increased public expenditure is likely to fuel inflation, in particular if public investment projects, as is often the case, encounter supply bottlenecks. It also encourages rent-seeking activity, which dissipates revenue without generating new wealth.

As the situation deteriorates, the government grants protection from lower priced imports to import-substituting industries in the tradeables sector. If protection is given across the board, it allows the creation or continuation of industries that would never survive unprotected; if applied more selectively, and in particular if given in the form of non-tariff measures, protection leads to the creation of local monopolies. Although justified initially as a temporary measure, protection often becomes a permanent feature of the economy.

As soon as the boom is over, revenue from the mineral sector declines abruptly and a fiscal deficit develops. At this stage, the government resorts to foreign borrowing and the national debt and debt service grows. The government also attempts to reduce the deficit by delaying investment in State-owned enterprises (which become de-capitalized) and by raising taxes on private mining companies. The deficit helps to accelerate inflation. Investment decreases in

[20] See Craig Andres (2000)

all sectors, partly because of uncertainty due to the higher inflation rate and partly because of the reduced surplus in the mineral sector and exhaustion of "easy" opportunities for import substitution.

The last stage is characterized by:

- a de-capitalized State mineral sector or a discouraged private mining sector;
- a non-mineral export sector that has been much reduced, including a prematurely shrunken agricultural sector;
- an import-competing sector with low capacity utilization and low profitability; the depletion of international reserves;
- a high debt-service burden;
- And hyperinflation.

At this stage, austerity programmes are imposed, if politically feasible.

The cycle may eventually start again, given a new increase in mineral export revenue, but the national economy will be further weakened with each successive cycle and over the longer term may actually contract. Nearly all mineral economies have suffered from at least some of the severe economic dislocations described above. The most noted cases have perhaps been petroleum-exporting countries but the non-fuel mineral economies have also been seriously affected. Dutch disease retards the process of sustainable development in at least two ways: first, it allows mineral wealth to dissipate, without constituting replacement capital for future generations; and, secondly, it severely weakens the national economy and reduces a country's capacity to diversify and to invest in sustainable production and technology. For mineral economies, therefore, the control of Dutch disease is a prerequisite to sustainable development.[21]

3.2.3 Some Costs and Risks of Mining projects to the Local Communities

The benefits of mining to the national economy are evident - through fiscal revenues, foreign exchange earnings, investment, employment, and other direct benefits to the communities near the mine sites. But the costs associated with mining are not equally distributed. The most direct impacts of the mining activities - the environmental impacts are local. The main social and cultural impacts are also local. Furthermore, there are costs associated with increased population pressures due to in-migration, leading to demands for increased services and infrastructure from regional and local levels of Government. The mining companies absorb

[21] See UNCTAD (1993) for a detailed discussion

some costs, but not all, and these areas must be addressed by mining policy in order to maintain social justice, and through it, protect the security of the project.

In-migration brings increased population pressures and local communities are often subjected to new disease patterns. Recent studies have shown that prevalence of HIV/AIDS in the mining localities is very high.[22] For instance, Africa Medical Research Foundation (AMREF) found that although the prevalence of HIV among the mineworkers in Geita is only 4%, the major problem is that; the workers interact with people with high prevalence of the epidemic. The area has a history of artisanal mining, and the majority of mineworkers were young single men who had emigrated to Geita, interacting with high risk women working in 50 bars and hotels in the town among which AMREF found the prevalence of HIV to be as high as 39%.[23]

Also, transformation of mining sector in Tanzania has happened with some features that pose serious concerns as far as peace and security is concerned. A move towards large scale mining in the areas concerned has been accompanied by displacement of thousands of small miners who used to operate in these areas. This has displaced a good number of people – mainly youths (most of them unskilled without secondary education) rendering them jobless, without offering them and their dependants any alternative means of sustenance. This has led to rising squalor and crime rates in the affected areas.

3.2.4 Risk Sharing in Mining Activities.

It would be reasonable to ask ourselves: who bears the risks associated with mining activities? Do the risks fall proportionally on both parties involved – that is the mining impacted communities and the mining companies? The common misperception has been that the investor bears all of the risks of a mining project. It is true that the investor bears the financial risk. But the mining impacted communities bear other, and often very significant, risks as well. The risks that the communities bear include:

- ✓ Risk of social and cultural disruption, and loss of identity through cultural or population dilution thru in-migration
- ✓ Risks to the long term sustainability of their environment
- ✓ Risk of societal alienation from "less fortunate" neighbours
- ✓ Loss of lifestyle and access to traditional lands

[22] See a Draft Report on the "Social and Economic Impacts of HIV/AIDS in Tanzania" by ESRF.
[23] See Tanzania: Focus on HIV/AIDS initiatives in mining areas: A Report by the United Nations Regional Information Networks – OCHA IRIN Africa.

It is therefore evident that the risks associated with the mining activities are disproportionately shared between the communities and the mining investors. The costs associated with these risks to the mining impacted communities are indeed huge, and cannot be easily quantified. While the investor risks some of his assets, the community sometimes risks all, in the hope of a better future.

The preceding sections have pointed out the possible benefits and costs of the mining in the economy. Based on the available information, we have briefly highlighted benefits to the Tanzanian economy as a whole and to the local communities. While it has been possible to use facts and data to justify the benefits, the same was not the case with risks and costs associated with mining activities. This is due to the fact that the risks and costs to the society are largely long term and are not immediately quantifiable. One major benefit to the economy, which has been pointed out is revenue to the government. The next section briefly presents the projection of government revenues from the mining activities. It is then followed by a section on where and how the revenues should be invested for sustainable development.

4

4.0 PROJECTION OF REVENUE FROM THE MAJOR MINING OPERATIONS IN TANZANIA

4.1 Premises and Methodology

Since a mine is a project that runs over some years, the tax revenues for the government will constitute a sequence of revenues over the life span of the mine. This study uses the available data from the large-scale mining operations to project the flow of government revenues from these activities. The projections exercise therefore starts with a financial analysis of the mine. This analysis yields both the cash flow to the mine owner and the tax revenues to the government over the life of the mine.

Each year, the government receives a sum of money from the gold mine in the form of different taxes. We broadly classify them in taxes on input, taxes on employment and a tax on profit. The first category is made up of four components: royalties, import duties, stamp duty and withholding tax. The second category, taxes on employment, is made up of three components: housing levy, VETA levy and the additional NSSF tax. There is only one tax on profit: a corporate income tax.

Revenue Projection Model

The revenue projection model used in this study, takes into account the financial analysis from the point of view of the government and the mine. The main premises and methodology are presented below:

The government

Tax income in a specific year *i*, (T_i) is made up of different taxes in Tanzania. We broadly classify them in three categories. The first category consists of taxes can be classified as taxes on inputs (T_i^I). A second category constitutes the taxes on employment (T_i^E), while the third is the corporate income tax (T_i^C).

(1) $$T_i = T_i^I + T_i^E + T_i^C$$

We can further break down the taxes on input. They consist of royalties (T_i^{IR}), import duties (T_i^{II}), stamp duties (T_i^{IS}) and withholding taxes (T_i^{IW}), or:

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(2) $$T_i^I = T_i^{IR} + T_i^{II} + T_i^{IS} + T_i^{IW}$$

Royalties are calculated as a percentage of the revenue in year *i*, net of operation cost of treatment and refinement, and net of the transportation and handling costs:

(3) $$T_i^{IR} = t^{IR}.\left(p_i.q_i - \left(C^{IT} + C^{IR}\right)q_i^u - p_i.q_i.\alpha\right)E_i$$

in this equation, q_i represents the gold that is sold at the gold price p_i in year *i*. t^{IR} is set by the government. It is the royalty tax rate, expressed as a percentage. C^{IT} and C^{IR} are variables that refer to the cost of treating and refining and are specific to the mine. The variable α refers to the transportation and handling costs. For simplicity, it is expressed as a percentage of revenue. E_i represents the nominal exchange rate for the respective year and converts the tax revenue in the local currency. It is calculated as follows:

(4) $$E_i = E^r.\frac{(1+\phi)^i}{(1+\varphi)^i}$$

with E^r representing the real exchange rate between the local currency and the US at year 0[24] and φ represents US inflation.

The quantity of gold sold on the world market (q_i) is connected to the quantity of ore used in the mine through the gold content g_i, or,

(5) $$q_i = q_i^u.g_i$$

In its turn, the quantity of ore used to make gold is related to the amount of ore mined (q_i^m) by the usage factor u_i:

(6) $$q_i^u = q_i^m.u_i$$

The second tax on inputs is the **import duties** levied. In our model, import duties are levied on imported deferred capital and the share of operating costs that is imported. According to the Financial Laws (Miscellaneous Amendments) Act of 1997, import duties have to be paid

[24] Throughout this study, 'Year 0' refers to the year of initial investment by the mining company

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after one year of commencement of commercial operation/production – currently capped at 5%.

(7) $T_i^{II} = t^{II}.\left(\left(C^{IT} + C^{IR}\right)q_{i-1}^{*}.\beta + DC_{i-1}.\psi\right)E_{i-1}$

In this equation, t^{II} is the import duty, expressed as a percentage. β represents the share of imported inputs in total operating costs for treatment and refinery. Likewise, ψ represents the traded component in deferred capital.

The third tax that applies to inputs is the **stamp duty**. The stamp duty is levied on the revenue. Denoting the stamp duty percentage as t^{IS}, we get:

(8) $T_i^{IS} = t^{IS}.p_i.q_i.E_i$

The last tax applicable to inputs is the withholding **tax** on technical services and management fees. It is calculated on the cost of treatment and refining. Denoting the withholding tax rate as t^{IW} we obtain:

(9) $T_i^{IW} = t^{IW}\left(C^{IT} + C^{IR}\right)q_i^{*}E_i$

Taxes on employment are made up of housing levy, taxes earmarked for the Vocational Education and Training Authority (VETA) and additional National Social Security Fund (NSSF) contributions. Additional NSSF is a contribution by the employer in addition to a direct contribution by employees to National Social Security Fund (NSSF)

(10) $T_i^{E} = T_i^{EH} + T_i^{EV} + T_i^{EN}$

In our model, **housing** levy is calculated as a percentage of total labour cost net of employment tax. The tax rate is t^{EH}. Labour cost C_i^{L} is expressed per tons of ore used. It thus has to be multiplied by the amount of ore used and multiplied by the exchange rate to convert it to the local currency. It incorporates labour used for mining $\left(C_i^{LM}\right)$, labour used for administration $\left(C_i^{LA}\right)$ and labour used for treatment and refining $\left(C_i^{LTR}\right)$. Labour used for administration is estimated as a share of total administration cost $\left(C_i^{LA} = \vartheta.C_i^{A}\right)$ Labour cost for treatment and refining is expressed as a percentage of total treatment and refining cost $\left(C_i^{LTR} = \rho.\left(C^{IT} + C^{IR}\right)\right)$.

(11) $T_i^{EH} = t^{EH}.C_i^L.q_i^u.E_i$

with $C_i^L = C_i^{LM} + C_i^{LA} + C_i^{LTR}$

The **VETA levy** and the **additional NSSF tax** are modeled in the same way. If t^{EV} represents the VETA tax rate and t^{EN} represents the NSSF rate, we get:

(12) $T_i^{EV} = t^{EV}.C_i^L.q_i^u.E_i$

(13) $T_i^{EN} = t^{EN}.C_i^L.q_i^u.E_i$

The last tax modelled is the **corporate profit tax** (T_i^C). It is calculated as a percentage on the profit of the mine. The tax base in this case depends on the mine revenues minus the royalties and stamp duty, minus operation costs, minus depreciation and minus interest paid on the loan:

(14) $T_i^C = t^C\left(p_i.q_i.E_i - T_i^{IR} - T_i^{IS} - q_i^u.E_i.\left(C_i^L + C_i^I\right) - DC_{i-1}.E_{i-1} - r.A_i.E_i\right)$

Here, t^C is the corporate tax rate set by the government, r is the nominal interest rate and A_i is the balance at the beginning of the period. Non-labour input costs (C_i^I) comprise the cost of ore (C_i^O), the cost of waste (C_i^W), administration costs (C_i^A), costs of treatment (C_i^T) and the cost of refinement (C_i^R):

(15) $C_i^I = C_i^{IO} + C_i^{IW} + C_i^{IA} + C_i^{IT} + C_i^{IR}$

In our model, A_i evolves over time according to the following function:

(16) $A_i = A_{i-1} + r.A_{i-1} - L$

Where L is a fixed yearly loan repayment.
Note also that for year 1, A_{i-1} is set equal to the loan principal (LP)). The nominal interest rate r, is calculated from the real interest rate $(\tilde{r})$ and the inflation rate in the currency the loan is expressed (φ). The nominal rate of interest is then calculated as:

(17) $r = \tilde{r}(1+\varphi)+\varphi$

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The Mine:

Profit of a mine in year *i* is simply total revenue in year *i* minus total costs in year *i*, or:

$$(18) \quad \Pi_i = TR_i - TC_i$$

Total revenue for the mine is made up of the revenues expressed in the local currency plus the change in account receivables:

$$(19) \quad TR_i = p_i.q_i.E_i + \Delta AR_i$$

The one year change in accounts receivable is simply the difference between the current and last years accounts receivable. Accounts receivable for a specific year are expressed as a fixed share θ of sales revenue expressed in the local currency in that year.

$$(20) \quad \Delta AR_i = AR_i - AR_{i-1} = \theta.(p_i.q_i.E_i - p_{i-1}.q_{i-1}.E_{i-1})$$

Total costs for a given year is the sum of deferred capital evaluated at the local currency

$$(21) \quad TC_i = DC_i.E_i + q_i^{w}.E_i.(C_i^{L} + C_i^{NL}) + L_i + \Delta AP_i + \Delta CB_i + T_i$$

In this equation, L is loan repayment. For loan repayment, we assume constant repayment at and a constant interest rate. Furthermore, we assume payments are made at the end of each period and the loan is fully reimbursed after the lifetime of the project. If we denote *LP* as the loan principal and *r* the nominal rate of interest, we can calculate the loan repayment using the following formula:

$$(22) \quad L = \frac{LP.(1+r)^{Y}}{\dfrac{(1+r)^{Y} - 1}{r}}$$

Note that these loan repayment amounts will be the same each year,//In reality mining companies can use accelerated loan repayment to defer tax liabilities, which can be a big loophole.// except for the year of the capital investment, which is assumed to be done in year 0. Furthermore, in our model, we assume that the principal loan *LP* is a fraction of the initial total capital investment cost (*I*), or $LP = \kappa I$.

Another component of total costs for the mine is the change in account payables. The change in account payables is the difference between the account payables in the current year and account payables last year. In our model, account payables are assumed to be a fraction (π) of the mines operating costs, evaluated at the local currency:

$$(23) \quad \Delta AP_i = AP_i - AP_{i-1} = \pi.\left(q_i^{*}.E_i.\left(C_i^{L} + C_i^{NL}\right) - q_{i-1}^{*}.E_{i-1}.\left(C_{i-1}^{L} + C_{i-1}^{NL}\right)\right)$$

The change in the cash balance is also a component of total costs. It is again defined as the difference between the cash balance in the current year and the cash balance in the previous year. Parallel to account payables, cash balance is expressed as a fraction (χ) of the mines operating costs at the local monetary unit:

$$(24) \quad \Delta CB_i = CB_i - CB_{i-1} = \chi.\left(q_i^{*}.E_i.\left(C_i^{L} + C_i^{NL}\right) - q_{i-1}^{*}.E_{i-1}.\left(C_{i-1}^{L} + C_{i-1}^{NL}\right)\right)$$

Finally, taxes (T_i) paid by the mine to the government are also a component of total costs.

In year 0, which we assume to be the year of the *initial investment*, the loan principal (*LP*) has to be added to the revenue:

$$(25) \quad \Pi_0 = TR_0 + LP - TC_0$$

while in the last year, the residual value (*R*) has to be added:

$$(26) \quad \Pi_l = TR_l + R - TC_l$$

The *R* thus brings in economic depreciation in our model. For simplicity, we assume linear depreciation over the life of the asset. If we assume the lifetime of the asset to be *t*, so that yearly depreciation of the asset will be $\left(I/t\right)$. The residual value is then obtained by subtracting the yearly depreciation of the asset form the *initial investment* for the duration of the project:

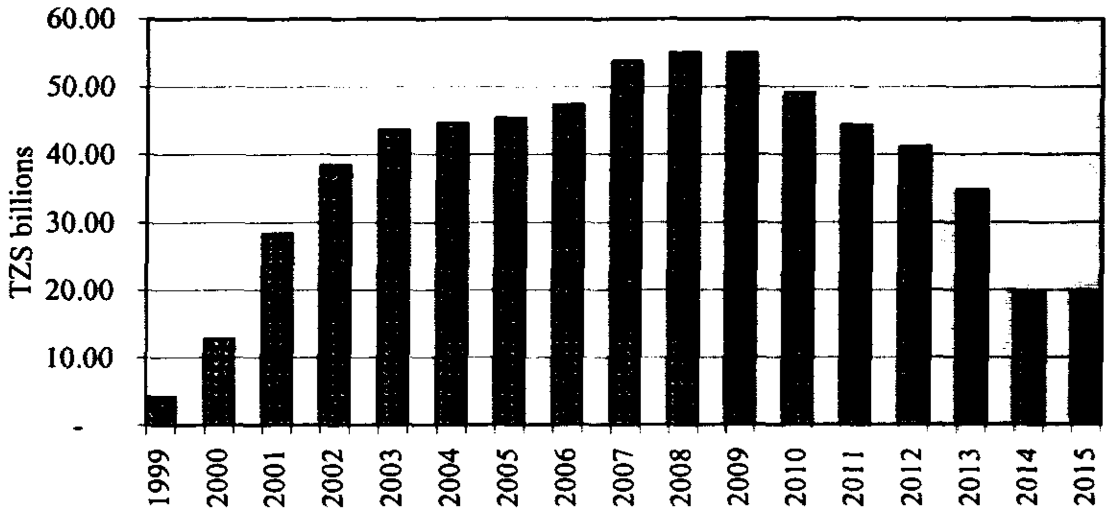
$$(27) \quad R = I - l.\frac{I}{t} = I\left(1 - \frac{l}{t}\right)$$

Having presented the basic premises and methodology for the projection model, in the next subsection we present the results of the forecasts.

4.2 Results of the Revenue Projection Model

Projections used data from the large *mining* operations, but the exercise includes an allowance for the small mining operations. Chart 4 below summarizes the results of the government revenue projection to the year *2015*.

Chart 4: Projection of Government Revenues



The trend of revenue forecasts presented in chart 4 above shows that the revenues to the government would start at low levels in the initial phases of mining operations. During this period, most of the establishments would be struggling to recover their capital expenditure. As most companies recover their capital investment, the government is expected to earn over TZS 50 billion a year. Projections indicate that the expected revenues to the government would eventually decline. This is due to the fact that mining becomes increasingly costly over time, and as miners adopt more sophisticated and expensive techniques to get the minerals deeper down, their profits are reduced, thus reducing the amount that would be paid to the government as tax revenues. This trend could however be reversed if the gold price at the world market improves, thus making the deposits that were previously uneconomical become economically viable for exploration.

5.0 STRATEGY FOR INVESTING THE WINDFALL REVENUES

5.1 The Approach

Having done the projections for the expected government revenue from the mining sector, it would be appropriate moment to present options for investing the mineral revenues for sustainable increase in the country's capital stock. In general, the proposals are based on the recognition of the fact that mineral revenues are resource rents, and should be invested wisely to result in sustainable increase in the country's capital stock. The options have been identified based on the priority areas in the Poverty Reduction Strategy, and the impact of the growing mining activities in the mining impacted communities. Identifying the right options amounts to seeking ways to translate this depletable natural capital into equitable and sustainable development. At micro level, the consideration is on the use of mineral revenues for community development initiatives with a focus on the impact that mining projects have on the local communities.

Also, as pointed out earlier, mining has been the fastest growing sector in Tanzania for the last decade. However, some concerns have been raised regarding this rapid expansion:

- Mineral sector in Tanzania has developed with few or no substantive inputs from the local communities.
- There is a broad-based dissatisfaction with the present nature of mining and the allocation and use of fiscal resources from the mining activities in Tanzania.[25]
- There is a perception that resource depletion and development is taking place without commensurate improvement in the quality of life (sustainable development). This is particularly true at the local levels of the government and the population as a whole.
- There are large environmental and social liabilities associated with the existing mining operations that have to be addressed by the government, industry (mining companies) and the local communities. These issues have a major impact on fiscal resource allocation.

Risks and costs and benefits associated with the mining activities are unequally shared between the communities and the mining investors. As pointed out earlier, the more direct costs are local, and are therefore born by the local communities. In effect, this indicates that there is a need for a much broader fiscal regime for the mining sector. The fiscal regime for

[25] So far, apart from royalty, no other component of mining taxation in Tanzania that receives attention as "resource rent"

mining needs to be viewed as wider than just taxation and must include distribution mechanisms for project benefits in order to guarantee project security and sustainability. Logically, this involves the use of revenues from the mining activities for the long-term benefits of the economy at large, but also considering the long-term benefits of the specific mining impacted communities, to whom the costs and risks fall more directly. Where then should the government invest the windfall revenue from the mining activities? This section attempts to address this question.

Investment in people: Human capital (Education) and Health

The first important area is investment in human capital. This needs to be a broad-based nationwide investment, going beyond the areas where the mining projects are located, and will therefore have impact on the entire economy. Since the country has in place programs for financing both secondary and primary education, perhaps the best option in this area would be emphasis on vocational education training. It is true that the mining companies pay a special levy to the vocational educational training authority as one of the statutory taxes. But there is a need to go beyond this small component, and see the importance of translating mineral wealth into sustainable increase in capital stock by creating human capital – whose role is crucial – both on growth and poverty reduction.

This form of injection of the mineral revenues into education sector will significantly reduce the financing gap in this priority sector. This will boost the education sector in the country, and contribute positively to growth. Also, deliberate measures to enhance primary education in the mine specific areas, will help to reduce the danger of low enrolment (than would be without the booming mining activities in these areas). Also, improvement in the vocation training education with focus on the areas of entrepreneurial skills development and information technology, will enhance the capacity of the local population to utilize the opportunities that are created following rapid growth of the mining sector.

A recent study on the social and economic impacts of HIV/AIDS in Tanzania found that the prevalence of the killer disease is very high in the mining areas.[26] The study found that those who are infected in these areas are ferried to their respective homes – mainly in the rural areas, to be taken care of. Besides, due to high earnings associated with high inequality in these areas, people are involved in some informal activities and consumption patterns – such as excessive alcoholism, which catalyze the spread of the disease in these areas and nearby urban centers. This phenomenon has been reported in many other countries that have large areas occupied by miners. In Zambia copper mines, the mining localities have large

[26] Draft Report of the Project on the Social and Economic Impacts of HIV/AIDS in Tanzania, by the Economic and Social Research Foundation.

prevalence of diseases such as respiratory ones and indeed HIV/AID in Zambia is closely related to Tuberculosis (TB). The government of Zambia report said two thirds of the patients at a major hospital in the copper-mining region of northern Zambia had died of AIDS up to 1999. (Olga Manda, *The Sunday Times, South Africa - August 27, 1999)*. In Indonesia it is also reported that mining societies are more prone to HIV transmission. The situation in Timika shows that the mining industry is conducive to HIV/AIDS transmission. Many mining companies operate in Indonesia, thus the condition in Timika may occur in other mining areas as well. A commitment from mining companies to support the HIV/AIDS prevention program is important to curbing HIV/AIDS transmission. These companies have been allocating funds to support the HIV/AIDS awareness programs in their mining localities.

The costs associated with this aspect therefore are not localized in the mining areas only, but born by the economy as a whole. Therefore, the government could consider use of portion of mining revenue to finance HIV/AIDS, TB and malaria control programs given the social and economic consequences of the pandemic in the economy.

Infrastructure

One of the critical problems facing the Tanzanian economy is poor infrastructure. Also, mining activities normally take place in remote areas, where the infrastructure is even poorer compared to most urban areas. Generally, most infrastructure projects implemented by the mining companies are localized – for the nearby communities. For more equitable impact on growth, there is a need for the government to channel a portion of revenues from mining to specifically address the problem of infrastructure in the rural areas. Due to infrastructure problems, the performance of key productive sectors in the economy has been seriously thwarted. Agriculture in particular, on which the majority of Tanzanians depend for livelihood, has been seriously affected by infrastructural bottlenecks. Investment in infrastructure will therefore have significant impact both in terms of growth and poverty reduction.

Investment in infrastructure is also vital since it will stimulate investment even in the other important social services – particularly health and education, by the private sector. Development of rural roads will open up the economy; enable the farmers in the remote areas to get access to agricultural inputs as well as transporting their produce to the market. With the mining companies investing in infrastructure, particularly roads, in those areas close to the projects, these investments are quite crucial for the security of their projects. The government therefore could consider going a step further, and direct the windfall revenue in infrastructure to achieve the balance in the respective regions. Also, this could go beyond the mining areas, and focus on the disadvantaged regions for equity considerations.

Diversification

In developing countries, mineral production that is large-scale and export-oriented tends to function as an enclave in the national economy with few backward or forward linkages to other domestic industries. The main and perhaps the only backward link is with the energy sector. Often there is no significant forward link, apart from the metal refining industry. These industries are capital-intensive with low labour requirements; moreover, in most developing countries the capital must be imported. Thus, the exploitation of mineral resources, in contrast to agricultural and manufacturing activity, typically provides little direct stimulus to the development of other sectors of the national economy. Further, as seen above, the impact of mineral revenues can deepen the dependency of the economy on the mineral sector and at the same time make diversification difficult to achieve.

For the case of Tanzania, the analysis shows that the forward and backward linkages between mining sector and other productive sectors of the economy are quite limited. In fact the strongest link is found with the utilities, indicating the significance of power and water services to the mining activities. Besides, as shown earlier, the contribution of mineral exports to the total export earnings has been growing fast, exceeding 40% in 2002. With the current pace of mining sector growth, there is likelihood that the mineral exports will completely outweigh the importance of other export components. Therefore, for long-term growth that is sustainable, the government could consider using a portion of revenues from the mining sector to achieve diversification. Strengthening the capacity of the existing supportive institutions and necessary infrastructure to stimulate production in such areas like agro-processing, manufacturing and services sector can enhance diversification.

A Reserve Fund for Mineral Resource Revenues

Given the prominence in mineral economies of the fiscal link, the redistribution of resource revenue plays a major role in propagating Dutch disease. Among other influences, the direct use of this revenue by government tends to reinforce the inflationary impact of a mineral boom. An alternative to direct revenue use is a mechanism whereby resource rents, once captured, are largely isolated from the government's general revenue fund, and their entry into the economy is controlled. This mechanism could take the form of a mineral-revenue reserve fund, which provides central government with a regular stream of income. As such, it would serve to stabilize receipts of, and expenditure from, the general revenue fund especially during mineral booms and their aftermath. Moreover, if the fund were constituted as a permanent feature of the economy, it would also serve one of the aims of sustainable development by preserving the proceeds from mineral wealth for future generations. Another important issue is that, the fund could also be used as a tool to sterilize the windfall revenues, thus mitigating the possible inflationary effects in the economy.

It is likely that the future market price of gold may be very high compared to the anticipated levels. This will have impact in terms of unexpected revenue flows. Mineral stabilization fund could therefore be established to progressively accumulate revenue from gold when the market price moves above a predetermined base level. This fund could then be frozen until the price falls below the base level, at which point it would then gradually be released. In addition to its stabilizing effect, the fund would prevent political pressure from determining the use of mineral revenues.

Also, the government could treat the increases in mineral revenue above projected levels as temporary windfalls, and use this surplus to augment international reserves as opposed to increasing domestic investment above planned levels. Such reserves could then help to finance the government's drought relief programme during prolonged periods of rainfall failure. This move would then allow the agricultural sector –on which the majority of the country's population depends for livelihood – to avoid serious underperformance as a result of these unexpected shocks. In both cases, the main aim would be to stabilize the trajectory of the economy through the mineral cycle. This would help to attenuate the negative impacts of Dutch disease and contribute to stable growth. Since stable economic growth contributes to the process of sustainable development, a mineral-revenue reserve fund could be a useful and even necessary policy instrument for Tanzania, given the targeted increase in the significance of mining sector in the economy.

It is worth noting however, that the issue of stabilization fund may not be a priority option for utilization of mineral revenues in Tanzania at least in the short run, because of small size of revenues. From the available data, actual mining revenue collections were only about 0.3 percent of the total revenue from domestic sources from 1998 to 2001, and rose modestly to about 1 percent in the year 2002. Also, projections indicate that the revenues are not large enough to be termed "windfall". In fact, the mining revenues form just a small proportion of total revenues, and an insignificant percent of gross domestic product. Therefore, stabilization fund is rather a longer-term strategy for this reason.

Community Development in the Mining Localities

While these broad investment options for equitable and sustainable development have been outlined above, it is important to highlight briefly the position of local communities in the mining areas. As pointed out earlier, the most direct costs of mining activities are local, and strategy to invest mining revenues should also take this fact into account. On this front, investment of windfall revenues for sustainable development is not only centered on the allocation of government funds. The process also involves other key players; the local communities and the mining investors. On the part of the government, the investment of windfall revenue in the identified options can be enforced via the formal channels of policy provisions, both at central and local levels. The mining investors on the other hand, are expected to deliver according to the formal agreements and law. However, there still remain some queries on: how to achieve equitable distribution, and how to capture the agreements and guarantee delivery. Also, another important issue is how the implementation can be carried out in an efficient and transparent manner.

Furthermore, the implementation and outcomes in the end depend largely on the level of participation of the local communities. But without adequate capacity, the participation may be quite marginal, and the impact thus be diminished. Therefore, another important issue is how to enhance the local capacity in the process. And in the end, we shall be interested in the outcomes, that is: how do we measure the results such that sustainable development outcomes are achieved for mine-impacted communities as a result of having received such benefits? The most likely indicators in this respect would be reflected in such questions like: What happened to poverty in mining communities? What happened to education, health and other social indicators?

We have identified the adverse socio-economic impact of mining as including the disruption of livelihoods and cultures, a large influx of migrants, an increased cost of living, and new disease patterns. In a sustainable development framework these will be key elements in the discussion of a mineral project and in the analysis of its costs and benefits. The communities that will be affected by a potential mineral development will be intimately involved in the decision making process. A decision to proceed will only be on the basis of a determination that the community and the environment can support the development and also on the basis of a determination of the nature of the community development and environmental rehabilitation programme that will have to be implemented. The community development programme may include the provision of social, educational and health services, as well as skills training for new livelihoods.

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With the determination of the programme of community development, a further issue arises regarding the respective roles of government and mining companies in its implementation and funding. It may be argued that companies should be responsible for those adverse impacts that are a direct consequence of mining operations, such as the disruption of livelihoods and territory and the adverse consequences of relocation – distance from social facilities, markets, etc. Given the uniqueness of each environment and of the characteristics of each community the direct impacts will vary and will be site specific. Therefore their determination will have to be negotiated between business, the community and local government. Those adverse impacts that are not directly attributable to mining will be more the responsibility of the government.

Funding community development, and indeed national development, from mineral revenues raises the critical issue of price volatility, as rising and falling global market prices for key minerals could lead to wide fluctuations in revenue and thereby undermine the stability of national budgets and of community project development. Price volatility could also lead to the suspension of mining operations or to their termination. Mining communities could consequently be subjected to indeterminate booms and busts, depending on the vagaries of the market.

Investing for Sustainable mining

One important area that the government should consider for much longer-term impact on the economy at large, is investing for sustainable mining. In general, measures in this direction may involve various dimensions. One possible aspect could be enhancing the capacity of small and artisanal miners by improving their access to credit, other supportive services and mining equipment. This will have huge impact in terms of incomes since the activities carried out by small and artisanal miners are largely labour intensive. Also, closely related to this is the issue of human resource development strategies for the semi-skilled/skilled labour.

Currently, the Ministry of Energy and Minerals in collaboration with Tan Discovery aree carrying out extension work especially on the area of value added activities upstream and downstream of mining. Gem cutting, gold purification, drilling, testing and various types of appraisal services are already being exported. However, market development for reject gem material, a hitherto neglected resource, is yet to be explored. This material, which is currently unmarketable, could be tumble-polished with inexpensive equipment and made into a variety of crafts. A ready market could be developed in the tourist industry.

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According to the mining sector development strategy, the objective of human resource development should be geared towards the transformation and organization of artisanal miners into advanced small-scale miners. In the long run, this would significantly increase the participation of local investors in the mining sector. One possible advantage is that, there is much wider chance for domestic re-investment of profits in other sectors of the economy, thus improving even further in terms of diversification. Also, human resource development measures would enable Mineral Resource Department staff and others to acquire appropriate skills that would enable them carry out their roles as required for the mining sector development. The short-term strategies have been identified in the mining sector development strategy to include:

- Enhancing the capacity of Mineral Resource Department in order to spearhead the new order of government in the mining sector
- Creating conducive working environment in order to attract and retain trained staff in the Mineral Resource Department
- Encouraging in-house and on-job-training programmes as one of the ways through which less experienced staff (e.g. geologists, mine engineers, mineral processing engineers, and technicians) could obtain specific and relevant knowledge and skills, thereby becoming specialists.
- Facilitating the continuous upgrading of knowledge and technology required in mining operations, mineral marketing and management within the sector.
- Continuously promoting general public information and creating public awareness on the mineral sector's potential, an opportunity in the mineral markets, environment issues, licensing procedures, guidance, basic mining regulations and other relevant areas.

The much longer strategies for human resource development – both for the semi-skilled and skilled labour categories include:

- To provide training in disciplines related to the mineral sector such as geology, mining engineering, mineral processing, gemology, geo-physicians, environmental science, geochemistry, administration, computer science, and other relevant disciplines.
- To ensure optimal placement of professional and technical staff in order to enhance efficiency and effectiveness.
- To promote mineral oriented multi-disciplinary research and ensure the easy dissemination of information on mineral development.
- To facilitate the continuous upgrading of miner's knowledge on technology, mineral marketing and the sectors' management.

These issues point to one important area as far as windfall revenue investment is concerned. There is a need to involve all the stakeholders in the process mineral sector development on one hand, and more importantly on resource rent sharing. This again takes us the next level, which is the focus on the capacity especially at local levels of the government. One important issue is that the local government authorities, or communities at large, lack the necessary capacity to handle the situations during various stages of mining projects development. For this reason, there is a need for the government to consider using part of the windfall revenue in building the capacity of the local government authorities, especially those directly involved in the mining activities. This move would include both the improvement in human capacity, and the supportive infrastructure in general.

Community empowerment and capacity building are probably the most challenging of the measures that need to be undertaken to ensure *sustainable mining*. The process may sometimes result in conflict of interests among the major players. It could in extreme cases precipitate into state and company hostility to programmes, threats to the lives of activists as well as attempts on their lives. As a key component to sustainable mining, resources and funding for community programmes have to be made readily available. Besides, it is important to recognize the need for community participation in resource management and the important role that NGOs can play in the realization of sustainable development.

6.0 OPERATIONALIZING THE STRATEGY:

There are important issues that need to be taken into consideration if the use of windfall revenue for economic growth is to be achieved successfully. Basically, these are centered on the area of capacity at the central government level, local government (with some consideration of mining impacted communities) and mining companies.

6.1 Capacity building for sustainable development: The State

The discussion of the framework issues highlighted a number of critical matters relating to democratic governance that require attention. They are indeed fundamental to the provision of an environment that will facilitate and promote sustainable development and are matters in which capacity must be built. Within the mining context, there are other, more technical capacity building requirements that also fall within the State's domain. These arise from the discussion of the State's practice and include:

- Developing an integrated policy framework for land use at central and local government level;
- Integration of environmental considerations into economic decision-making at central and local government level;
- Decentralization of the supervisory and monitoring and evaluation functions;
- Mineral revenue management, including, for funding community development and for funding capacity building;
- Local government regional planning for the co-ordination and provision of community services;
- Developing a framework for assisting and enhancing small-scale mining;
- Developing in formation systems that make for easy access and that facilitate the co-ordination required for sustainable mining.

These functions and frameworks are interrelated and emphasize the need for policy networking at the level of both local and central government. Such networking could be considerably facilitated through the use of modern information and communication technologies, as has been described. Their use could also make possible the holding of virtual meetings involving the various officials and community and company representatives involved in decision-making thereby reducing the cost.

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6.2 Enhancing the Capacity of Local Communities

For many communities affected by mining operations land provides the basis for the major economic activity, and also provides resources such as medicinal plants and game. It also has a cultural and religious significance. There is therefore a direct and organic link between the environment and their economic, social and cultural rights. Unfortunately, of the three actors (the government, mining companies and communities), communities are the weakest politically.

Community capacity building will be required primarily towards community empowerment and effective participation in the consultative processes and mechanisms delineated in the discussion of governance, as well as in the use of the information and communication technologies that may be used as part of a sustainable development network. This will include training in human rights, negotiation techniques, an understanding of mineral exploitation and the interpretation of accounting and other technical information.[27] NGOs have been responsible for much of the community capacity building that has been undertaken because of the long history of the State's collaboration with mining companies in violating the human rights of communities.

It is worth mentioning at this point that there are important issues of transparency and accountability at local levels that need to be taken into account:

- One problem with devolution of powers and benefits to community or local level government is that the use of funds often lack transparency, and the local community lacks engineering or implementation capacity
- The major challenge emerges on how to develop a mechanism which would deliver value and sustainable services and infrastructure to communities in a transparent manner

6.3 Capacity Issues for the Mining companies

The principal areas in which mining companies need to build their capacity are human rights, community involvement and the environmental implications of their operations. The critical step is to internalize them in corporate policy, and above all, in corporate ethos and practice. It must however be pointed out that direct company involvement in community development may require a large outlay as well as access to technical expertise and other resources that may be more easily available to large companies than to juniors.

[27] For instance, in Tanzania, district councils are allowed to charge levy not exceeding US$ 20,000 in one year. But this provision is not utilized effectively by the local authorities partly due to lack of clear knowledge on the issue.

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6.4 Some recommendations for enhanced impact of mineral revenue investment:

- The government should consider a national planning programme, with inputs from the local government authorities and NGOs to define the nature and timing of mining revenue investment. Alternative models for action should be developed, which meet the needs of the individual regions and local governments.
- The government, with inputs from local government authorities, industry and NGOs should define the economic, social, cultural and environmental impacts of ongoing and planned resource development projects at the local to regional level
- The government should develop and implement training programmes for the local government authorities to ensure that they are able to undertake the additional management and planning activities that will arise as a result of expanding mining activities.
- Government should prepare an action programme for overall development that reduces, to the extent possible; the inequalities that will arise as a result of resource rent revenue sharing between resource-rich and resource-poor regions.
- Intra-regional working groups should be established in order to share experiences and expertise in implementing decentralization and resource rent revenue sharing programmes.
- Planning at all phases of government should emphasize sustainable and socially responsible resource development that has as a central theme, the understanding that virtually no resources are truly renewable and virtually all will be depleted over time.
- The Government should always favour saving and investment rather than consumption of the resource rents.
- The government should avoid treating realised natural resource revenue windfalls as permanent income gains, particularly in the case of spikes in commodity prices, and allocate pertinent government revenues to an investment and stabilisation fund;
- The Government should use fiscal and monetary policy to maintain a low inflation rate, which will help to maintain competitiveness of export and import competing sectors

REFERENCES

Andrews, C. (2002) "Money from Mining: Whence it Came, Where it Went" A presentation in the "Mining 2002 Resources Convention" November 2002, Brisbane, Queensland.

Ascher, W. (1999). "Why Governments Waste Natural Resources: Policy Failures, in Developing Countries" Baltimore: Johns Hopkins University Press.

Davis J. et al. (2001) "Stabilization and Savings Funds for Non-Renewable Resources: Experience and Policy Implications" Occasional Paper 205, International Monetary Fund. Washington D.C.

ESRF (2003): "The Social and Economic Impacts of HIV/AIDS in Tanzania" Draft Report. Dar es Salaam, Tanzania.

Grilli Ezro, R. and Maw Cheng Yang (1988) "Primary Commodity Prices, Manufactured Goods Prices, and Terms of Trade in Developing Countries: What the Long Run Shows" The World Bank Economic Review, 2(1) 1 – 47

Gylfason, T. and Zoega, G. (2001). Natural Resources and Economic Growth: The Role of Investment

Hancock G. (2002) "Sharing the Risks and Rewards of Mining" A presentation at WMMF workshop on Mining and People, Papua New Guinea.

Kwabena Mate (2002) "Capacity Building and Policy Networking for Sustainable Mineral-based Development". Report prepared for UNCTAD, 2002.

Leite Carlos and Jens Weidmann (1999) "Does Mother Nature Corrupt? Natural Resources, Corruption and Economic Growth" International Monetary Fund, Working Paper WP/99/85

Philips, L. et. al (2001) "Tanzania's Precious Minerals Boom: Issues in Mining and Marketing" African Economic Policy Discussion Paper No. 68

Ross, M. (2001), "Extractive Sectors and the Poor," Report issued by Oxfam America, available at www.oxfamamerica.org.

Ross, M. (2002). "Natural Resources and Civil War: An Overview with some Policy Options" A report prepared for conference on 'The governance of Natural Resource Revenues' in Paris, December 2002.

Sachs, Jefrey D. and Andrew, M. Warner (2001) "The Curse of Natural Resources" European Economic Review, 45 827-838.

United Republic of Tanzania: Mineral Sector Development Strategy (1997): Ministry of Minerals and Energy

United Republic of Tanzania: Mineral Sector Policy of Tanzania (1997): Ministry of Minerals and Energy

United Republic of Tanzania: Ministry of Minerals and Energy. Mining Database.

URT The Economic Survey. President's Office, Planning and Privatization, Dar es Salaam Tanzania

United Nations Regional Information Networks (2003): "Tanzania: Focus on HIV/AIDS Initiatives in Mining Areas" OCHA IRIN Africa. Found at http://www.irinnews.org/AIDSreport.asp

World Bank (2002) "Treasure or Trouble? Mining in Developing Countries" World Bank Group. Washington D.C.

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ATTACHMENT 3

ECONOMIC AND SOCIAL RESEARCH FOUNDATION

(ESRF)

Report of the Stakeholders' Workshop on Mining Revenue Investment Strategy

(A Component of Tanzania Mining and Tax Policy Project)

Workshop held at the ESRF conference hall in Dar es Salaam on the December 11, 2003

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1.0 INTRODUCTION

1.1 Workshop Objectives and Organization

The stakeholders' workshop on mining revenue investment strategy was held in Dar es Salaam at the Economic and Social Research Foundation (ESRF) on December the 11th 2003. The workshop was organized by ESRF and its major objective was to solicit the views of the stakeholders on the proposed mining revenue investment strategy, which was prepared by ESRF. The major components of the workshop therefore were the presentation of the study by the consultant and subsequent discussions by the stakeholders. This report presents a synthesis of issues that were discussed during the workshop and recommendations for better use of mining revenues in Tanzania.

1.2 Participation and Workshop Program

The workshop drew participants from Government Ministries and Departments, Development Partners, Mining Companies, Small Miners' Associations, Mineral Dealers, Civil Society Organizations, Academic Institutions, and Media (See the list of participants in Appendix 3 at the end of this report). Three presentations were made during the workshop, followed by a brief session of general discussion and clarification of issues raised during the presentations. Thereafter, two groups were formed to deliberate on Tanzania's position in terms of benefits from mining and proper use mineral revenues (see appendix 2 at the end of this report for the details of the guiding questions for group work). The group discussions were followed by presentation of the issues raised by the group members, and plenary session. The program and workshop guide have been appended (see appendix 1 and 2 at the end of this report).

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2.0 EMERGING ISSUES

2.1 Opening

Dr. Oswald Mashindano, a Senior Research Fellow at the Economic and Social Research Foundation, opened the workshop. In his remarks, Dr. Mashindano noted that the workshop was timely since the Tanzania's mineral sector has become the fastest growing sector, and there were mixed feelings among the public about the benefits of the sector to the Tanzanian economy. He challenged the participants to come up with concrete ideas on how to make the best use of mineral wealth for sustainable development in the country.

2.2 Presentations

After the opening remarks, Dr. L. C. Phillips presented the background of the Tanzania Mining and Tax Policy Project, highlighting the key objectives of the project and the achievements so far. Dr. Philips emphasized that the different components of the Tanzania Mining and Tax Policy projects were intended to ensure the flow of benefits of the fast growing mining sector in Tanzania to the citizens of Tanzania. The major areas addressed in the project ranged from policy environment for sustainable mining, proper utilization of mineral revenues and diversification of economic activities with view to creating linkages between mining sector and other productive sectors in the Tanzanian Economy.

Mr. Godwin Nyelo, presented an overview of mineral sector in Tanzania, noting the key economic policy changes, improvement of the investment climate in the sector, and subsequent achievements following these measures. Mr. Nyelo highlighted the recent developments in the mining sector in Tanzania, pointing to the increase in mining licenses, and a stream of benefit flows following the huge foreign direct investments in the sector. The main areas he outlined include the provision of social services, establishment of secondary economic activities, direct and indirect job creation and improvement of infrastructure in the mining localities.

This overview was followed by a presentation by Mr. Prosper Charle, on the strategy for investing mineral revenues in Tanzania. Mr. Charle pointed to the increased flow of revenues to the government as an important component of the stream of benefits from the mining sector in the country, pointing to distinguishing characteristics of mineral revenues as resource rents. He presented the projection of government revenues for 15 years, noting the important feature of the trend of projections – which is a rise in expected revenues to the government, and a decline thereafter. Mr. Charle pointed to the proper investment of mineral revenues for sustainable increase in country's capital stock as an important compensation for loss of natural capital resulting from mining activities. The major investment options that were identified include: education for human capital formation, infrastructure, health, and investment for sustainable mining. He highlighted the major issues to be addressed for operationalization of the strategy, pointing to the need for institutional capacity building for proper administration of the mining sector, and management and distribution of mineral wealth in the country.

2.3 Key Issues from Group Work and General Discussions

2.3.1 Mining Benefits to Tanzania

During the discussions, the participants raised their concern Tanzania is not getting enough from the sector. The arguments in this direction were centred on the low contribution of mining to the Gross Domestic Product and economic growth in general, creation of employment opportunities, poverty reduction, and technological transfer. Also it was pointed out that currently, the amount of government revenues from the sector is too small to have impact in terms of capital creation to compensate for loss of natural capital in the country. Some participants were concerned that the current royalty rate (3%) is too low – denying the government revenue from the sector. But some participants were of different opinion that the royalty rate is not a problem since flow of revenues to the government depends more on the world market mineral prices, which influence the profitability of mining operations.

The participants attributed the inability to benefit from the sector to the lack of domestic capacity – particularly institutional capacity for proper implementation of key policy decisions, technological capabilities, inadequate skills, and lack of local entrepreneurial skills. Also, the participants were concerned that most Tanzanians do not have the right information on large-scale investments that have taken place in the mining sector in Tanzania. Also, it was pointed out that lack of clear statistics to indicate the amount of revenues from the sector and their distribution, casts doubts among the general public that there is no transparency on the issue.

2.3.2 Investing Mineral Revenues for Development

It was pointed out that the government should invest the revenues from the mining sector in the areas that would result in capital formation including: human capital, physical capital, and institutions. The areas that were identified in this respect include education, health, and infrastructure. Also it was pointed out that the government could consider using a portion of mining revenues to finance agriculture – and specifically irrigation schemes due to the importance of agriculture sector in the country and its potential in influencing the lives of many Tanzanians.

Also, it was suggested that the government should allocate a portion of mineral revenues (suggested portion – 5% of mineral revenue collections) to address the special concerns of the mining impacted communities. The participants pointed out that the key areas to address should be community development programs – health, education and infrastructure development. The local communities should do the prioritisation of these community development projects and efforts should be directed towards local capacity building for implementation, monitoring and evaluation of the project outcomes. Also, it was pointed out that strengthening the capacity of the local communities to utilize the opportunities created by the expansion of mining activities in their areas could be helpful in reducing poverty.

2.3.3 Addressing Small Miners' Concerns

The participants raised their concern about the problems facing the small miners throughout the country – particularly the issue of access to credit, equipment, and technology. The participants supported the idea the government should consider setting aside mineral revenues reserve fund, which would be used as "collateral" to assist small miners access credit in the country. It was pointed out that unless the government come up with measures to address these problems, it would be difficult to think of ways to effectively utilize mineral wealth in the country. The participants called for the government's attention to see small-scale mining as an important component not only in achieving sustainable mining but also in reducing poverty.

Small miners who participated in the workshop expressed their concerns that the government is not paying any attention to the needs of small miners, and the focus has only been on the

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incentives to large scale miners. Some pointed out that the current situation indicates the lack of preparedness for a smooth transition to large scale mining domination in the country. They pointed to the increase in the social evils – such as theft, armed robbery and similar crimes as an outcome of marginalization of many youths who were previously involved in small scale and artisanal mining.

While the disorganization of most of artisanal and small miners in the country was identified as the major obstacle in supporting this category of miners, it was observed that even where clear organization existed, capitalization in terms of financing and equipment has been a major problem.

"My claim has been technically surveyed and it has been found that it is possible to get 1 gram (of gemstone) for every tone of ore mined. With this geological information, I have prepared a project plan for funding, but cannot get credit from any bank. If this project could be financed, we could employ more than 300 people directly in the mine, and create even more jobs through secondary business establishments. In 18 months of operation, we could have reduced poverty and changed the lives of the villagers in that area quite substantially. However, due to financing difficulties, this has not been possible. I don't know the reason why commercial banks in Tanzania are not interested in financing small mining operations" (Small Miner from Morogoro – workshop participant)

Small miners from Geita – Mwanza, shared their experience with the participants – pointing to the financing difficulties and lack of equipment as major constraints in their operations. They therefore pointed out that strengthening the capacity of small miners could have large impact in terms of poverty reduction since their operations touch the lives of many people in their areas of operations. An example was given of one miner in Mwanza (who was also a participant in the workshop) who employs 500 people in his mine, with possibilities for more jobs as the product moves from the mine, to processing and through the marketing chain, and domestic reinvestment of profits in the other economic activities. The participants therefore urged the government to address the concerns of small miners, for the benefit of communities in the mining localities and the economy at large.

4.0 RECOMMENDATIONS

For improved benefit flow from the mining sector, and proper utilization of mineral revenues in Tanzania, the participants recommended the following:

- ⇨ There is need to review the mining laws in the country.
- ⇨ There is need to review incentives, stream line taxation and create a competitive mineral market to increase revenue collection.
- ⇨ There is need to find ways to promote local investment in the mining sector. The government should form 'mineral revenues reserve fund' which could be used to strengthen the capacity of local investors in the sector – in terms of improved access to credit.
- ⇨ There is need to focus on the promotion of value addition in mineral production.
- ⇨ There is need for concerted effort to empower, formalize and rationalize the activities of small-scale miners.
- ⇨ There is need to improve knowledge on the mining sector to the general public – for every Tanzanian to know what is happening in the mining sector, for a better flow of information, and therefore, well informed investment decisions in the sector. In this regard, the following were recommended:
  - Introduce the mining curriculum in formal education
  - Effective use of media for information dissemination
  - Use of modern tools of information sharing – the Internet. Currently, information on mining sector in Tanzania can be found on the following websites: www.chamberofmines.com, www.madini.org, www.tra.go.tz
- ⇨ There is a need to sustain the war against corruption due to potential loopholes and possibilities of multi-practices where mineral wealth is concerned. The participants were positive about the recent steps made – where the government officials are required to declare their personal assets. But there was a general concern about the procedures used and implementation of law governing this issue.

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Appendix 1: Workshop Program

Economic and Social Research Foundation

(ESRF)

Stakeholders' Workshop on

Mining Revenues Investment Strategy

Thursday, the 11th of December 2003, ESRF Conference Hall

Workshop Program

TIME	ACTIVITY	RESPONSIBLE
08.30 -09.00	**REGISTRATION**	All
09.00-09.15	Self Introduction	All
09.15-09.20	Background of the Project	Dr. Lucie C. Phillips
09.20-09.35	Workshop Guide	Dr Oswald Mashindano
09.35-09.45	Overview of the Mineral Sector in Tanzania	Mr Godwin Nyelo
09.45-10.15	Mining Revenues Investment Strategy	Mr Prosper Charle
10.15-10.30	Clarifications	All
10.30-11.00	**TEA BREAK**	**All**
11.00-13.00	Group Discussion	All
13.00-1400	**LUNCH BREAK**	**All**
14.00-15.00	Group Presentation	All
15.00-15.05	**CLOSING**	Chairman

Appendix 2: Workshop Guide

Economic and Social Research Foundation

(ESRF)

Stakeholders' Workshop on

Mining Revenues Investment Strategy

Thursday, the 11th of December 2003, ESRF Conference Hall

Workshop Guide

1 Objectives of the Workshop and Expected Output

This workshop is intended to present the Draft Report on Mining Revenues Investment Strategy to the stakeholders in order to get their views, which will subsequently be incorporated, in the final version of the report.

2 Workshop Process

S/N	Time	Activity	Responsible Person(s)
1	15 Min	Presentation: Background of the Tanzania Mining and Tax Policy Project	Dr. L. C. Phillips
2	15 Min	Presentation of the Background Paper: Overview of the Mineral Sector in Tanzania	Mr Godwin Nyelo
3	30 Min	Presentation of the Background Paper: Mining Revenues Investment Strategy	Mr Prosper Charle
4	15 Min	Questions by Stakeholders	All
		Question 1 (a) Given the rich mineral endowment in the country, is Tanzania getting enough from this Sector? *(b)* Is Tanzania making a satisfactory headway in terms of re-investment of the mineral revenues for the country's capital stock and benefit sharing? *Question 2*: If not, what are the reasons and which corrective measures are appropriate?	Group 1
5		Minerals are non-renewable resources, which generates revenues for the country. However, unless revenues from minerals are invested strategically and/or vigilantly, the mining activity cannot be sustainable. *Question 3*: Where should revenues generated by the mineral sector be invested in order to ensure sustainable increase in the country's capital stock? *Question 4*: How could this investment be made?	Group 2
6		Group Presentations and General Discussion	All

Note: Consultants and Facilitators will be passing around during the group discussions. Please feel free to seek clarifications from them whenever it is necessary.

Appendix 3: List of Participants

Stakeholders' Workshop on Mineral Revenue Investment Strategy

at ESRF Conference Hall 11th December 2003

List of Participants

S/N	Name	Institution	Designation	Telephone	Email
1.	Nuru Mtulia	USID	Specialist of Eco. Growth	0744884059	mtulia@usaid.gov
2.	Manumbu Vedastus	P.O.P.P	Economist	0748632099	
3.	Francis Zangira	IPP Ltd	Director Min. Pro.	0744310777	
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9.	G. Nyelo	Ministry of Energy and Minerals (MEM)	S. Geologist	0744282212	gnyero@yahoo.com
10.	Janevava Emmanuel	UDSM	Student		Lugumamu2002@yahoo.com
11.	Rogers Sezinga	TANDISCOVERY	Researcher	0744280478	rsezinga@yahoo.com
12.	Deus Kibamba	TGNP	Gender Activist	0744644357	dkibamba@hotmail.com
13.	C. Lulindi	VPO	Poverty Monitoring Officer	0741452120	lluhindicheda@hotmail.com
14.	John Nkondokaya	VETA	CDS	0741614473	
15.	Jirabi William	Division of Environment	Mining Engineer	2113983	wmbjirabi@yahoo.com
16.	Wilfred Machumu	Tunduru Mines Office	Resident Mines Officer	0252680069	

S/N	Name	Institution	Designation	Telephone	Email
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20.	Bahati Kalekwa	TAWOMA	S/General	0744825826	Bkalekwa2000@yahoo.com
21.	Msafiri Munga	Madini-Moro	Ag. RMO	2602336	
22.	Shimba C.L	Miner	Technician	0744516391	
23.	Christopher Kadeo	Miner		0744304739	
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27.	J.S. Digallu	Mwalazi Mining	Director		digllu@hotmail.com
28.	Jarvis A. Simbeye	Geita District Council	Executive Director	0748454781	
29.	Golden Hainga	S.S. Miner	PML & Executive Director		
30.	Dr. O. Mashindano	Economic and Social Research Foundation	Research Fellow	2760260	omashindano@esrf.or.tz
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ATTACHMENT 4

1 ## Why Investing Revenues Now Matters!

Presented by

Dr. Lucie Phillips, Chief of Party

Tax and Mining Policy Project

ESRF Mining Revenues Workshop December 9, 2003

2 ## USAID Project Goal: Sustainable Mining-driven Development

- **Project worked to make mining a healthy source of growth in Tanzania**
- **2001-2003**
- **Partners: ESRF, MEM, Tan Discovery, TCM**

3 ## How can mining serve the common good?

- **Countries also need to analyse their opportunities and risks**
- **New mining is a major economic transition**
- **Now is when it is growing rapidly**
- **Just a dozen years from now, likely to shrink**

4 ## Window of Opportunity

- Tax revenues calculated for the first time by our partners in this project
- 2002-2015 up, then down

5 ## Revenues should be different from regular tax income

- Why?
- If spend as usual, main items may be:
  - Personnel
  - Consumption (better offices, cars, etc)
- Spending creates inflation, others cannot afford
- When boom ends, personnel retrenched
- When it's gone, it's gone.

6 ## Healthy Alternative is Investment

- Some countries create a Trust Fund
- Others segregate into Development Budget
  - Infrastructure—Water, Electricity, Roads
  - Education and health
  - Environment
- Also provide for
  - Mining communities
  - All local communities
  - Improving administration of mining
  - Diversification: non-mining enterprises and jobs

7 Goose that lays the golden egg

- Some countries eat her for dinner
- Others fight over her, tear off her wings, legs, head; then fight one another for the scraps
- *We cannot keep her alive forever*
- But can build for the future with the short burst of blessings she brings

8 SWOT Analysis of Tanzania's Mining Sector

9 Country Risks in Mining Development

- ***Dutch disease*—Mining can squeeze out other sectors**
  - **By generating influx of foreign exchange**
  - **Making currency strong and other exports expensive**
  - **Generating inflation, hurting those not in mining**
- **Greed can bring out unethical elements, foreign and local**
- **Political conflict, dangerous if armed forces or mercenaries allowed to be involved**
- ***Civil war in several countries, Sierra Leone, Angola, Nigeria, Liberia, both Congos***
- **Tanzania aims for Botswana, Ghana model**

10 Diversification of economic activities

- Value-added activities
  - Gemstone training (tumbling, cabochon, faceting)
  - Jewellery making—wire-wrap master craftsman
  - Entrepreneurship
  - Suppliers to mining industry
- Results in 1 year: 12 new jewellery businesses with 35-40 full-time employees, 218% increase in employment, 100% report *training* benefits

11 Cottage Jewellery Industry=Value Added Chain

12 Addressing environment and safety in small-scale mining

- Big companies have international standards
- Small-scale and artisanal more complex
- Project pilot tested outreach materials
- Assists MEM extension work with small miners on environment and safety
- Has identified model miners, moving from artisanal to small-scale investor approach

13 Results of mining extension, 1.5 years

206 new SMEs created in small scale mining industry (holding legal primary mining licenses)

10,000-18,000 direct small scale mining jobs created with project assistance, support services 40-50,000

14 new businesses, with about 50 new jobs, provide goods and services to *formal mines*

621 small scale miners trained in environmentally friendly practices and safer mining techniques

Starting point in 1995: 550,000 employed in artisanal mining

14 Economic impact of small-scale mining

- Min. wage for *manual labor in mining communities = 6 times those in agriculture*
- Mining one earns ca. 10 times more than on farm
- Earnings are spent and invested in rural communities, recycling ca. 6 times/year

- Miners working with project inject TZS11 bn-TZS 22 bn per year directly into rural economy
- Artisanals' incomes more sporadic, est. at least TZS 440 bn in 1995 (TZS4000x200dx550,000 miners)

15 Improving Understanding

- Mutual understanding between Tanzania small-scale miners and international companies
  - Each brings different benefits to Tanzania
  - Legal, orderly coexistence feasible
- International understanding, e.g. Tucson Protocols ended boycott, threat to Tanzania's good name
- Public awareness of the benefits of mining

16 Asanteni sana!

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ATTACHMENT 5

TANZANIA CHAMBER OF MINES

MINING AWARENESS SEMINAR HELD ON 16TH NOVEMBER 2003 AT THE COUTRYARD HOTEL DAR ES SALAAM

BACKGROUND

The Chamber organized a tour of mining operations for various groups of people which included the following; journalists, government officials, NGOs, Civil Society and Private sector such as Confederation of Tanzania Industries (CTI) and Tanzania Chamber of Commerce Industry and Agriculture (TCCIA). The tour which took place on 15th October 2003 took the participants to Geita Gold Mine and Bulyanhulu Gold Mine. The tour was followed by a seminar on 16th October 2003 at the Courtyard Hotel.

PURPOSE OF THE PROGRAMME

The purpose of the programme was to provide an opportunity for the various stakeholders to see modern gold mining operations resulting from good fiscal policies adopted by the government. At the same time it is hoped that the programme would go a long way in attempting to answer some of the critical issues facing the industry.

OPENING OF THE SEMINAR

Prof. Simon M. Mbilinyi, Chairman of the Tanzania Chamber of Mines opened the meeting at 10:00 am with a speech which is attached.

THE SEMINAR

Minister's opening remarks:
The mining industry has absorbed a lot of criticism from various quarters. Two groups of critics can be identified:

1. Those that are genuinely ignorant
2. Those who deliberately oppose or are against mining by distorting facts to achieve their own ends.

Seminars, workshops and mine tours are important educational tools and should get all the necessary support since both groups benefit from the discussions.

PRESENTERS

Four papers were presented:
Ms. M. Maajar: Mining Legislation, The Basic Principles
Mr. Rishit Shah: Mining fiscal Incentives

Mr. Godwin Nyelo: Mining benefits to Government
Dr. Lucie Phillips: Overview of Tanzania Tax and Mining Policy

DISCUSSION

Law Reform Commission Recommendations on mining Act 1998

Is in stark contrast with the Mineral Policy 1997
Does not take into account government's adoption of market economy

Chairman of the Law Reform Commission Hon. Judge Bahati responded that the Commission is not an expert. LRC prepared a report as a discussion paper which seeks assistance from stakeholders. Recommendations have been tabled for comment by the public and should not be taken as final. LRC therefore expects inputs from experts.

Mining Agreements

How mining agreements between the investor and the government should be treated in terms of confidentiality. Are they subject to public scrutiny? Can MPs for instance be allowed to peruse the Agreements entered into between Government and mining companies.

Ms Maajar of MRNM and Mr. Kalemani of the ministry of Energy and Minerals responded that mining agreements are not for public consumption. Fundamental terms of agreement enforce non-disclosure of information, the parties must agree upon any disclosure. Government cannot do that unilaterally. They are private corporate documents and therefore not subject for scrutiny by Parliament. The economic set up is now different, from command to market economy. Mining projects are owned 100% by multinationals and are therefore not state owned entities.

Peter Turner pointed out that the Chamber and members will play a big role in contributing to the LRC recommendations by inputting Internationally recognized contribution.

Amb. Mbaga

Government participation in ownership of mining ventures is imperative (reading the mood of the public)
Previously 15 % ownership
The result would be permanent partnership .. no fear of expropriation etc.
Important to get examples how this is handled in other countries.

On equity participation it was responded that this was the case during the command economy. It is practiced in other developing countries but is not so common.

Mutagwaba – Need to maintain competitive edge

Tanzania is about to negate mining investments like Ghana did which resulted in drying up of new investments in the mining sector. Other countries are trying to improve their mining fiscal incentives in order to woo more investments.

Issues needing attention by government:
There is need to build adequate capacity to administer the sector and legislation
Registration of engineers with Engineers Registration Board (ERB) - not more than 5 engineers in the mines are registered with the Board.
There are delays in getting mineral rights e.g. Ghana. 3 months to get license Tanzania 1 year or more to get licence

Rogers Sezinga

Environmental Impact Assessment and Environmental Management Plans are supposed to be transparent and have to undergo public scrutiny.
Government has no control on environmental damage caused by SSMs.

Rishit Presentation

Discussions

Grant Pierce

Stressed on the importance of maintaining fiscal stability. Mines do feasibility studies according to the fiscal regime that the host country offers. Shifting of goal posts will have negative consequences to a mining project. Tanzania needs to maintain its competitive edge.

He called for closer working relationship among stakeholders.

Rogers

Negative Tax Protection
Local service providers cannot compete due to distorted tax legislation (5% Vs 15% i.e. a local company pays 15% import duty while a mining company pays 5% import duty. This should be corrected so as to give equal opportunity for local service providers to participate.

It was felt that it's the ministry of energy and minerals responsibility to take up the matter with the relevant authority.

Vinoo Somaia

The fiscal regime has worked well in the mining industry
Government needs to consider the model that has worked well be applied to other sectors.

He made a clarification that Royalty – is paid whether or not company makes profit, based on turnover.

Constantine Sebastian

Planned expenditure of mining revenues is an important consideration and needs addressing by the government.

Rogers

Contribution of the sector to poverty reduction efforts
Mining companies have contributed immensely towards local communities
Growth has changed lifestyles of villagers
Villagers in Nzega are involved in planning for their development "Nzega Model"
Villagers have ownership of the plans
Community is therefore empowered
Presence of LSMs creates opportunities for the communities – this is yet to happen. On the other hand District leaders have no plans to take advantage of the emerging opportunities.
District can benefit more if the inhabitants seize the emerging opportunities to do business with the mining companies such as supply of perishable goods.

Peter Turner

Discussed about the importance of mineral fund accumulation as resources for the future. Maintenance of fiscal discipline.
Opportunity for SSM: low tonnage deposits, high grade and resulting huge revenue.
After having five new gold mines in five years, the question is why are new mines not happening now. Could this be the beginning of decline in FDI in the mining sector? What has caused this? The fiscal regime and stability are key to attracting more investments.
Mining has also stimulated other sectors of the economy – the multiplier effect.

Maajar

There has been consistent disrespect of Development agreements by TRA
Very harsh dispute resolution process that is expensive, any dispute calls for effecting up to 2/3 of the liability.

Mining companies have not resorted to Arbitration although provided in law – companies would want to maintain good relations with Government. It is the company suffers in the process. This may not go on for too long.
The ministry should assist in a more productive manner

Paddy Hoon

Writes reports which encourages investors to come to Tanzania
There have been changes; some better some not
Tanzania's choice was for the better
Social development – impressive
Army involved in mining
Not to change goalposts
Income Tax Law in effect January 2003
Already some investors have decided not to invest in Tanzania. It is not a good signal.
TCM ready to assist the MEM

S. L. Lwakatare

It would be a bad thing to go back to where we came from
More needs to be done in terms of contribution to the local community. We need to be seen to be doing more.
General public opinion: the 1998 Mining Act – Need to take stock, have we really succeeded: what about the contribution of SSMs, what about small deposits, these issues need addressing. The challenge is to ensure equal growth in terms of contribution by LSMs, MSMs and SSMs all sub-sectors should proceed in tandem.
To see to it that more of our people are participating.
There is need to convene a stakeholders meeting to deliberate on the way forward towards more effective involvement of SSMs.

Mutagwaba

Public not well informed on mining issues. More needs to be done on public awareness.
Poverty alleviation: small-scale mining naturally comes in
SSM is a family thing, therefore a livelihood issue
In Zimbabwe, Government allocates a block of land to the Commissioner of mines who allocates to prospective miners.
The Government only controls and monitors
Consider this in the Tanzania context.

Constantine Sebastian

For effective public awareness campaign, forging a partnership between press and industry is very crucial.

Chair
TCM and Ministry to work closely on a strategy on PR

Press
Aloyce Komba from "The African"

Mr. Aloyce Komba, one of those who visited the mines gave a brief on the tour of mining operations.
The tour was an eye-opener. Albeit the tour was compact we were able to see for ourselves the modern technology applied by the LSMs. He proposed that:
Invite students to visit the mines
Offer training opportunities in mining journalism

Minister's closing remarks

Fiscal/Taxation issues: Government will ensure that mining sector continues to grow.
Relations between TRA and mining companies need to be strengthened and Ministry would be ready to assist where necessary.
Capacity building in the Ministry of Energy and Minerals is an on-going activity
Way forward: TCM and MEM to work on PR and information dissemination and be heard more often.
Controlled areas – Merelani etc Ministry is working on that.
Income Tax Act: Will air the concerns of the mining industry
Further research on mining benefits is warranted.

The Seminar was closed at 2:17pm

ATTACHMENT 6

1 ## Tax and Mining Policy

Project Overview

Presented by

Dr. Lucie Phillips, Chief of Party

Chamber of Mines Workshop, Courtyard Hotel, Dar es Salaam, October 16-17, 2003

2 ## Goal: Sustainable Mining-driven Development

- **USAID-funded project, believed to be the first to recognize that mining drives development**
- **Budget $1.6 million over 2.5 years**
- **2001-2004**

3 ## Supports Tanzania Government's Mineral Policy

- Dynamic, well-organised private-sector led
  - Large- and small-scale mining industry
  - *conducted in a safe and environmentally-sound manner;*
  - contributing over 10% of GDP;
  - a well developed gemstone lapidary industry; and
  - providing employment to Tanzanians.

4 ## Focus on Country Strategy

- Country and investors both face opportunities and risks
- Most analysis concentrate on investor risk
- Countries also need to analyze their opportunities and risks
- *Big mining is a major economic transition*

5 ## SWOT Analysis of Tz's Mining Sector

6 ## Country Risks in Mining Development

- Economy squeezes out other sectors
  - By generating influx of foreign exchange
  - Making currency strong (expensive exports)
  - Generating inflation
- Greed can bring out unethical elements, foreign and local
- Political conflict, dangerous if army or mercenaries allowed to be involved
- Civil war (e.g. Sierra Leone, Angola, Nigeria, Liberia)

7 ## How the project addresses policy and capacity-building

1. Review and dialogue on tax policies
2. Review and dialogue on government use of income from mining
3. Diversification of economic activities to create jobs and value-added
4. Mining extension to artisanal sector on environment, management and mine safety

5. Computer skills for all partners and trainees

8 ☐ Partners in the Project

- Chamber of Mines
- Tan Discovery
- Economic and Social Research Foundation
- Ministry of Energy and Minerals
- IBI, with USAID funding

9 ☐ Reviewing the tax policies

- Goals
  - Reliable tax policy, yielding appropriate revenue levels—now 13% of GDP, 15-17% normal
- Communications tools
  - Websites—TRA, MEM, TCM
  - Manual for taxpayers and auditors
  - Stakeholder workshops
- Training for TRA tax structure
- Project was not consulted on Income Tax Law

10 ☐ Mining Tax Revenue Investment Strategy

- Government must invest wisely for future, because resources will deplete
- The Economic and Social Research Foundation (ESRF)
  - developing revenue forecasts
  - proposing investment strategy
- Cater to special needs of impacted communities
- Develop value-added chain
- Invest for long term, infrastructure, education, health

11 ☐ Diversification of economic activities

- Value-added activities
  - Gemstone training (tumbling, cabochon, faceting)
  - Jewellery making—wire wrapping
  - Entrepreneurship
  - Suppliers to mining industry
- Businesslike approach to training empowers trainees
  - Advertised to public
  - Trainees pay part of costs

12 ☐ Samples of Wire-wrap Jewellery

13 ❑ Addressing environmental concerns due to artisan and small scale mining activities

14 ❑ Improving Understanding

- Mutual understanding between Tanzania small-scale miners and international companies
- Internationsal understanding—Tucson Protocols
- Public awareness of the benefits of mining

15 ❑ Geological diversity

16 ❑ Asante sana!

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ATTACHMENT 7

1 ## Economic benefits of the new mines in Tanzania

Godwin M Nyelo *(BSc, FGG, MBA)*
Senior Geologist - Ministry of Energy and Minerals and
Coordinator, Tax and Mining Policy Project

TCM Workshop, Dar es Salaam,
October 16, 2003

2 ## Why Invest in Mining?

Factors affecting decisions to invest

- Prospective geology for gold and base metals, diamonds, industrial minerals, gemstones, etc
- World economic conditions that affect commodity prices (=profits) and availability of exploration or investment funds
- Favourable investment climate that minimise investment risks

3 ## Prospective Geology

- *Available geological information*
  - Geological maps- mapping done by Geological Survey since 1926
  - Country wide airborne *Geophysical data compiled* during 1978-1981
  - Existing mines- most mines were expropriated in 1967-1972, hence establishment of STAMICO
  - Geology similar to other mineral producing countries- RSA, Canada, Australia, Ghana, etc.

Good geology not enough in itself to attract investments in the mining sector

4

5 ## World economic conditions

- Commodity prices make investments in mining to be economic or non-economic particularly marginal deposits, depending on the direction of change
- Changes in technology turn uneconomic or marginal deposits to be economic
- New *technologies improve mine recovery* and hence low production costs

6 ## Favourable investment climate

- Investment risks arise from political or economic instability
- Politically –Tanzania has been stable since independence
- But economic policies were a major risk to investors: notably there was no guarantee against expropriation (prevalent with Arusha Declaration), no security of tenure, foreign exchange controls, etc.

7 ## Why change economic policy?

- Geological information very attractive - abundant mineral resources - not enough in itself
- Conducive world economic conditions, with available resources for exploration, which are limited in both time and space – i.e. once available have to be utilised, otherwise if not the opportunity is lost forever
- New technologies were available - reworking tailings dumps
- Lack of internal capacity (in terms of capital, management, technical skills)
- High Political stability: But, economic policies were keeping investors away

8 ## Changes of economic policies

- Trade liberalization of the early 1980s

- Reforms of the financial sector of 1990s
- New mineral policy, 1997
- New mining and investment laws
- Incentives for the mining sector (The Financial Laws (Misc. Amendments) Act, 1997

9 **New Mineral Policy 1997**

- The vision is to have a strong, vibrant, well-organised private sector led, large and small scale mining industry conducted in a safe and environmentally-sound manner; contributing over 10% of GDP; a well developed gemstone lapidary industry; and providing employment to Tanzanians.
- Changed role of government from active participant to that of facilitator, regulator and administrator, and service provider.
- More emphasis on private sector led mineral sector development

10 **New Mineral Policy 1997** *(cont'd)*

Strategies to achieve set policy objectives

- Fiscal framework that ensure return of capital
- Streamlining legal and regulatory framework to monitor the sector
- Putting in place a strong institutional mechanism – building capacity to administer, regulate and facilitate development of the industry
- Encouraging development of a gemstone lapidary industry- value added activities
- Integrate mining into the national economy- policies to encourage growth of local industry

11 **Legal Framework:** **New Mining Act 1998**

- Removal of discretionary powers
- Guarantees security of tenure, automatic progression to next stage of development
- More transparency in issuance and administration of mineral rights
- Guarantee of commercial operations, whereby mineral titles can now be traded freely
- No mandatory government participation

12 **Fiscal incentives for the mineral sector**

- Generous tax incentives? Royalty 3% & 5%
- No Import duties on capital goods for exploration and mine development
- Withholding taxes on dividends, paid out profits, and on technical services
- Ring fencing around the mining sector: loses in one mine can be offset against profits in another
- 100% depreciation with additional 15% allowance. Now changed to accelerated depreciation.

13 **Why generous fiscal incentives for the mineral sector?**

- Prevailing fiscal regime and structure not conducive for development- no return to investment possible
- Complex tax administration with high tax rates and a multitude of taxes (nuisance taxes)
- Lack of financial resources and services within the economy – investment funds have to come from outside (globalisation of finances)
- Poor infrastructure and hence high costs of doing business in the country

14 **Results of the various measures**

- Increased mineral exploration from 9 licences in 1990, to more than 500 which active now (large scale only)

- More foreign direct investments
- Opening of new commercial mines, 5 gold mines since 1998,
- Anticipated more contribution to the national economy: in terms of GDP, Foreign exchange, jobs, hence various effects on different stakeholders

15

16 **Stakeholder expectations**

17 **Several categories of costs and benefits**

- Opportunity cost of labour in the mines that could be used in other sectors
- Lost production in other sectors vs. more productivity in mines
- Lost land to the mine or for settlement of relocated people
- Costs associated with foreign exchange scarcity, for both imports and exports of goods
- Use of public goods - roads, water, clean air, etc.
- Costs due to low Human capital - education, health, and safety
- Costs due to environmental impacts
- Costs due to fiscal incentives – e.g. tax exemptions may outweigh tax revenues

18 **Benefits of the mines**

- Government revenues
- Employment opportunities
- Improvement of human capital
- Increased foreign exchange
- Improvement of infrastructure
- Creation of other economic activities (multiplier effects)

19 **Government revenues**

- Direct revenues from the mine
  - Royalty, payroll levy, withholding tax, corporate tax, PAYE.
- Indirect revenues from suppliers, service providers, other economic activities
  - Contractors, utilities (water, electricity, telephone), hotels, transport, etc.
  - These could be more enhanced by putting appropriate policies to encourage local consumption of goods and services

20 **Government revenues**

21 **Employment opportunities**

- Direct in the mine projects – over 7000
- Indirectly in service industry
  - Service providers – fuel, food, transport, etc.
  - Contractors - mining, explosives, etc
- Employment in other activities that started due to the presence of the mine projects
  - Community projects- e.g. poultry in Nzega
  - Hotel industry, transport sector, tourism, general service industry,
  - Estimate 1 job in a mine creates 2-10 more jobs

22 **Improvement of human capital**

- Education facilities
  - Improvement of existing schools: support to schools, books, teachers, etc.
  - New schools and other facilities
- Health services
  - Improvement of existing facilities,
  - New facilities; availability of doctors, nurses, medicines

- Other social services
  - HIV/AIDS campaigns, social centres, sports facilities, police posts, etc.

23 Improvement of infrastructure

- Communications
  - All mine projects are improving roads, ports facilities, etc. (Kahama 78km, GGM 85km, Golden Pride Isaka Nzega road, Afrika Mashariki 15km)
  - Addition of rolling stock on TRC to ferry Cu- concentrates
- Water supply
  - Kahama and GGM have water pipelines from lake Victoria with off take points for villages, Golden Pride supports Nzega town water supply
- Power supply
  - Step-down transformers extended to villages.
- Others
  - Extension of telecom facilities – e.g. Geita, Nzega,

24 Increased foreign exchange

- Foreign direct investments for both exploration and mine developments - more than **US$ 1.3 billion since 1997**
- Increased mineral exports from US$ 26 m in 1997 to US$ 420 m in 2002, Projections for 2003 - US$ 480 m
- More foreign exchange available to other users
- Expected effect - balance of payment, stability of local currency! price index stability- low inflation.

25

26

27

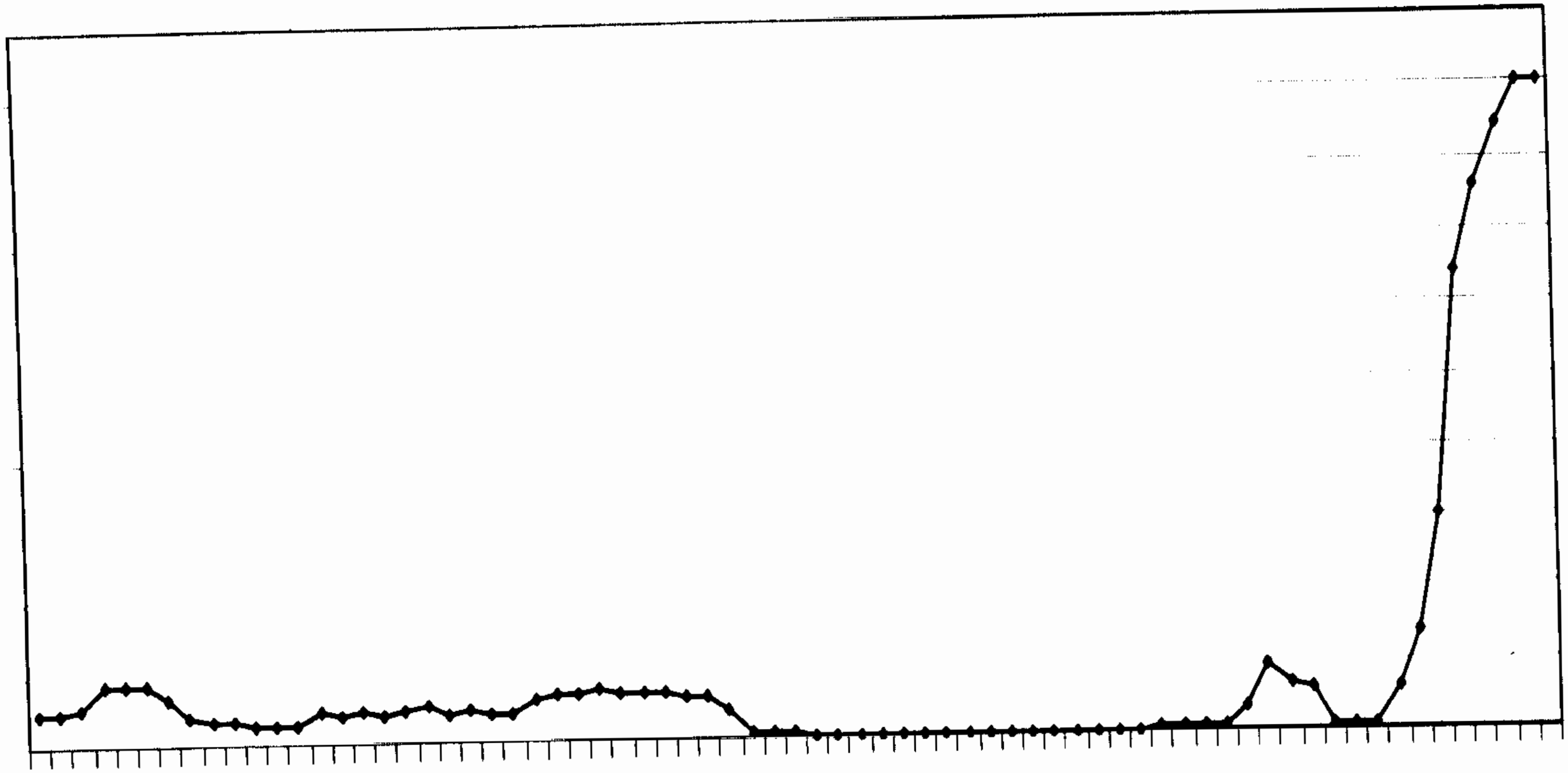
28 Creation of other economic activities (multiplier effects)

- Growth of service industry
  - Hotels, transport, tourism.
  - Establishment of equipment Suppliers
  - Suppliers of consumables like explosives, fuel, lime.
  - Suppliers of foodstuffs
- Deliberate efforts to remove negative tax incentives to local service providers

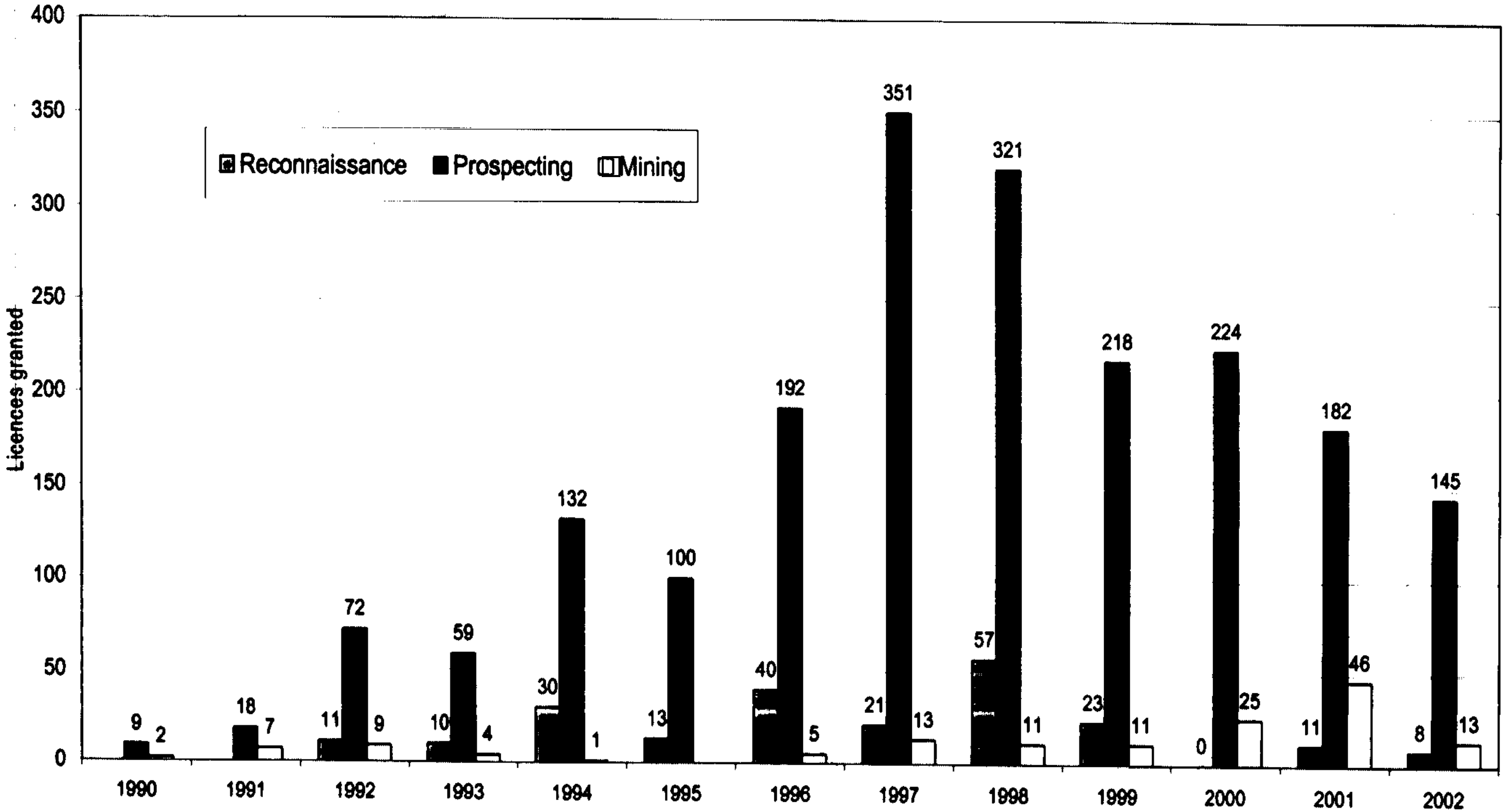
29 Creation of other economic activities (multiplier effects) (cont'd)

30 Conclusion

31 Way forward



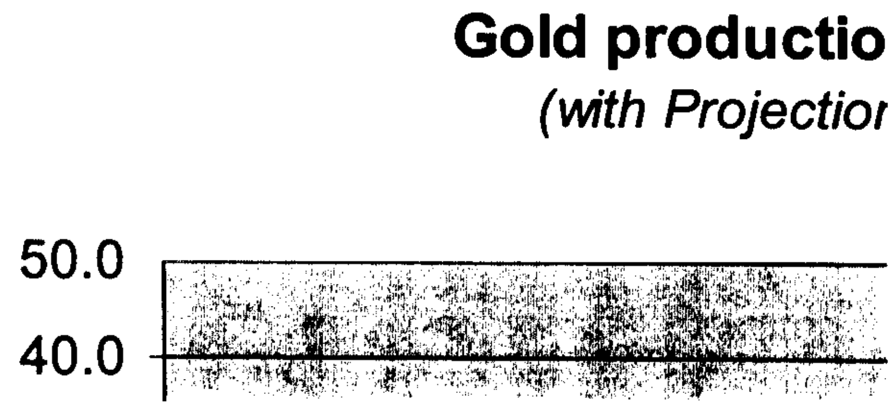
LARGE SCALE MINERAL RIGHTS GRANTED FROM 1990 TO 2002



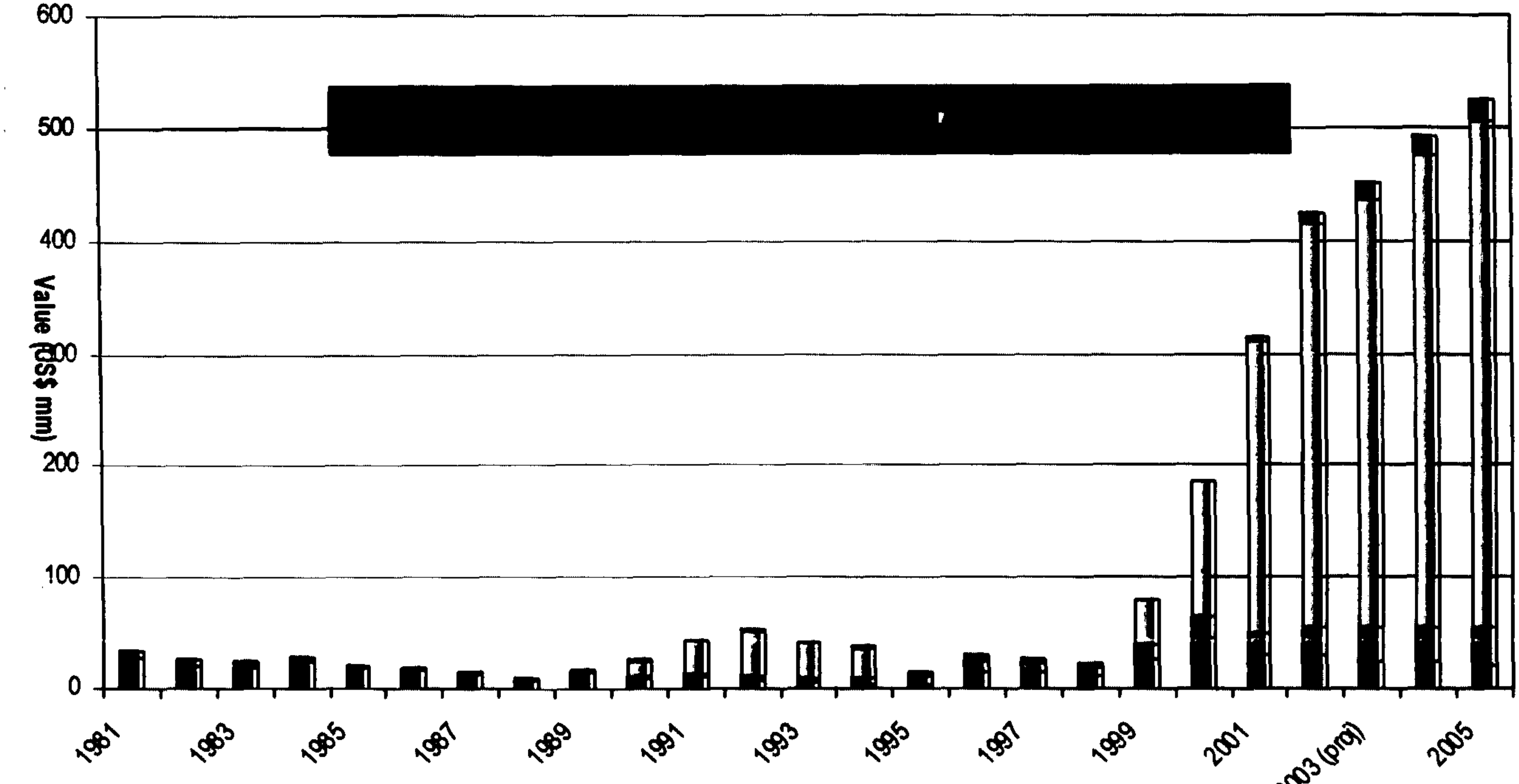
Godwin M Nyelo, (BSc, FGG, MBA)

Gold production 1936-2002

year	Tons
1936	2.2
1937	2.4
1938	2.5
1939	4.1
1940	4.4
1941	4.4
1942	3.2
1943	2.1
1944	1.7
1945	1.5
1946	1.5
1947	1.4
1948	1.4

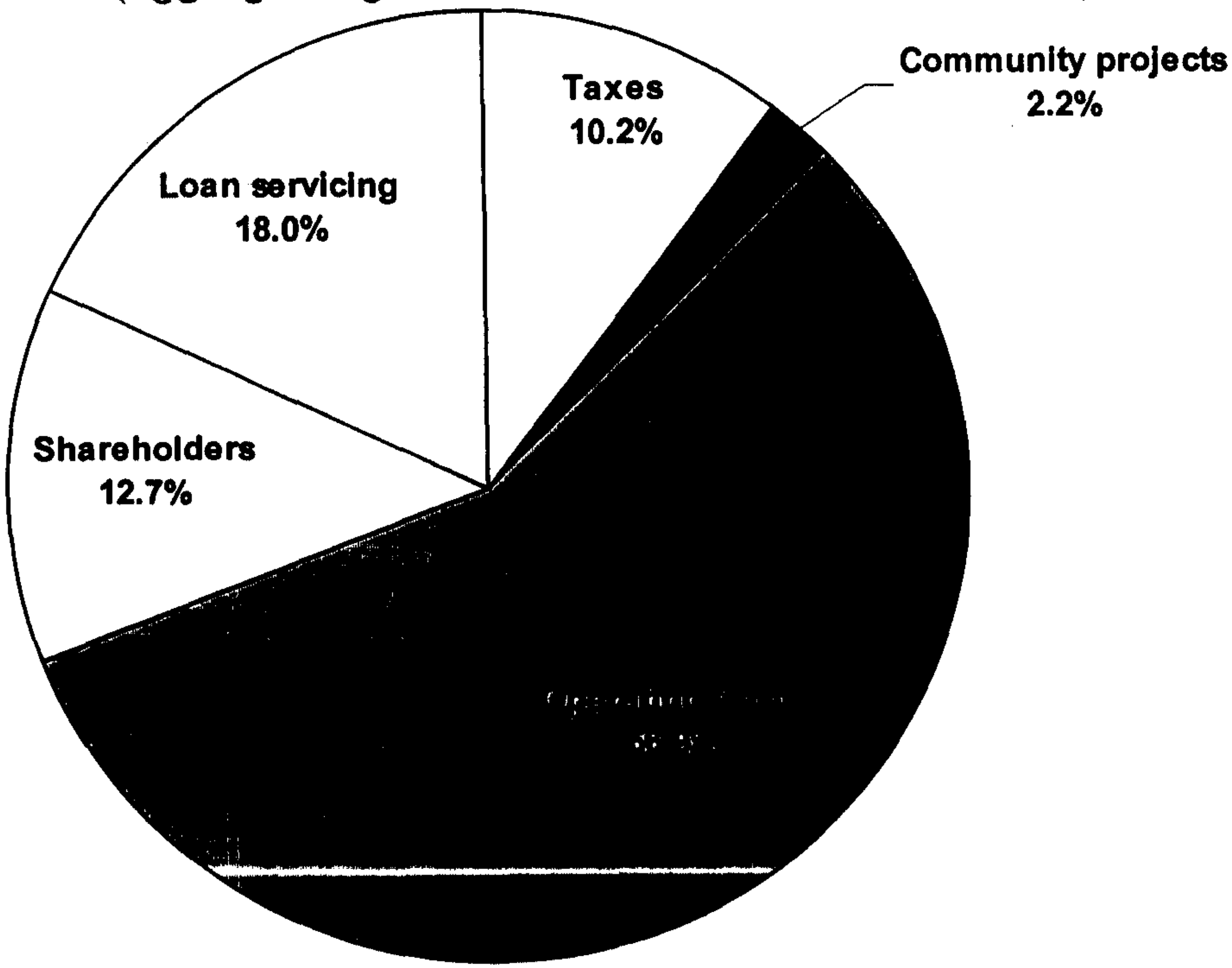


Increase in mineral production & exports from 1981-2002 *(Projections to 2005)*



Godwin M Nyelo, (BSc, FGG, MBA)

Distribution of Revenues in Selected Mines 1997-2002 (aggregate figures of total revenues of USD 896m)



ATTACHMENT 8

TANZANIA CHAMBER OF MINES

PUBLIC AWARENESS CAMPAIGN

1. BACKGROUND

The Chamber organized a mines tour on 8th November 2003 for 33 Members of Parliament. The Mines visited were Bulyanhulu Gold Mine at Kahama and Geita Gold Mine at Geita.

The programme culminated in a Seminar that was held at the Parliament in Dodoma on 9th November 2003.

2. OBJECTIVE

The aim of the programme is to increase the awareness of the legislators on the mining industry as it continues to grow and gradually portray the mining industry in its right perspective as a dependent economic pillar.

The tour at both Bulyanhulu Gold Mine and Geita Gold Mine focused on the Mine, process plant, environment and socio-economic development efforts being done by the mines on surrounding local communities.

Whereas at Bulyanhulu mining operations are conducted underground, at Geita, the operation are open – pit.

The MP's were able to see the gold pour at Bulyanhulu and the much talked about copper concentrate which is transported to Japanese smelters for separating the copper, gold and silver.

The MPs were impressed by the sophistication, size and complexity of the mining operations, and gave them an idea of the capital, technological and managerial requirements for ensuring a successful operation.

3. The Seminar

The Seminar to the MPs was conducted on Sunday 9th November 2003 and attended by 215 MPs out of a total of 288 MPs. Four papers were presented as follows:

Ms. Mwanaidi Maajar of MRNM Advocates presented a paper on Mining Legislation; Mr. Godwin Nyelo of the Ministry of Energy and Minerals presented a paper on Mining Economic Benefits; Mr. Rishit Shah and Robert Mills of PricewaterhouseCoopers made a presentation on Mining Sector Fiscal incentives and related tax issues such as VAT.

Chief Executives Officers from various mining companies also attended the seminar notably from Geita Gold, Williamson Diamonds, Afrika Mashariki Gold and service providers i.e. Regent (T) Ltd.

The session was chaired by Hon. William Shelukindo, who is Chairman of Parliamentary Committee on Investment and Trade and the Minister of Energy and Minerals Hon. Daniel Yona was the moderator. Hon. Prof. Simon Mbilinyi, a Member of Parliament and also Chairman of Tanzania Chamber of Mines was also present.

3.1 Discussions

The discussion that followed was not confined to the presentations but extended to other mining industry issues. For the MPs it was an opportunity for them to know more about the industry particularly that the CEOs of the mining companies were also present. News media also had the opportunity to conduct personal interviews with CEOs of companies.

The main issues that transpired can be grouped as follows:

- Human rights issues
- Fiscal issues
- Environmental issues
- Mining Legislation
- Institutional capacity issues
- Techno-economics

- Large Vs Small Scale Miners
- Community Development

3.1.1 Human Rights issues

It was pointed out that some villagers that were relocated in order to pave the way for mine development at Geita had not yet been compensated. The Minister of Energy and Minerals responded that it is an issue that is currently being handled by the government and the fact is that Geita Gold Mine had already met it principal obligation of effecting compensation funds to the District Council.

It was proposed that valuation for compensation purposes should involve both a Ministry of Lands Officer and a Ministry of Minerals Officer to jointly carry out the assessments.

3.1.2 Fiscal Issues

It was pointed out that there was need to consider that a portion of royalty paid to central government be ploughed back to local governments where mining operations are carried out. Moreover the rate of royalty on gold of 3% is inadequate and that an upwards review is necessary. The issue of royalty to the District Councils has been relentlessly pursued by some legislators, particularly those hailing from the mining areas.

There was response to the effect that the figure of royalty is comparable to many countries in the third world therefore not only unique to Tanzania, moreover it is charged against gross turnover (not on profit as many MPs have been thinking). The presenters emphasized the crucial issue of maintaining Tanzanian's competitiveness in attracting FDI into the mining sector.

3.1.3 Environmental Issues

There was discussion regarding what happens to the open-pits after mining ceases. One MP commended the proposed establishment of the Golden Pride University College of Mines that would serve as Training ground for geoscientists and engineers.

It was mentioned that management and conservation of the environment is an ongoing activity throughout the life of mine with revegetation of disturbed lands being central to the conservation efforts.

3.1.4 Mining Legislation

It was generally accepted that Tanzania's mining legislation is one of the best in Africa, it is however felt that it needs to be reviewed taking stock of issues such as the need to foster development of small scale mining as well as to address the issue of development of minerals other that gold and diamonds which have been the focus of foreign investors. Industrial minerals were cited as candidates for future development.

3.1.5 Institutional Capacity

It was pointed out that the lack of capacity of the Ministry of Energy and Minerals to effectively regulate and monitor the mineral sector which has been rapidly expanding will impede smooth administration of the sector– the government needs to address the shortcoming.

The Ministry acknowledged the shortcoming and pointed out that a lot is currently being done to alleviate the issue through training of staff and provision of working tools and transport facilities.

In terms of export of minerals it was pointed out that the Ministry and TRA do check all exports of gold from the mines following clear laid down procedures – ensuring that there is no element of pilferage.

3.1.6 Techno-economic issues

There was mention of the copper concentrate from Bulyanhulu gold mine which is exported to Japan for processing to recover gold. The issue centred on the rationale for exporting the concentrate and whether such facilities could not be set up in the country. The need for the government to be vigilant in monitoring the shipments was stressed.

The issue was explained from the point of view of economies of scale that is, setting up a smelter in the country would not be a viable proposition to any investor.

The House also wanted to know whether there were prospects for developing nickel at Kabanga in Kagera Region. The response was that it is currently under exploration.

3.1.7 Large and Small Scale Mining

The issue of frequent conflicts between large and small scale mining was mentioned. Particular reference was made to the Merelani Tanzanite mines where there have been unpleasant incidences between AFGEM and small scale miners.

There was response to the effect that if each party respected the law of the land such conflicts would and should not occur. The crux of the matter therefore is respect for the law in order to avoid any misunderstandings.

3.1.8 Community Development

It was mentioned that there is no legislation in place that would make contribution to the development of the communities around the mines compulsory as opposed to the present set up, whereby such contributions albeit significant, is done on the investors own volition.

The response was that there are development agreements in place between the investor and the government which stipulate the terms and conditions of engagement which must be respected. Mining companies are increasingly aware as good corporate citizens of the need to contribute towards the welfare of surrounding communities.

3.1.9 Other Issues

The issue of conflict minerals and minerals that may fall into wrong hands such as terrorist groups was mentioned – and the country's preparedness on the issue. It was responded that for diamonds, Tanzania is a signatory and conforms to the *Kimberley Process Certification to monitor* the movement of diamonds in the market.

3.1.10 Financial Report

The mines tour and seminar in Dodoma costed Tshs 28.0 Million. The flight cost if excluded, the cost is Tshs 16.0 million as per attached notes.

4. Conclusion

The Mines tour and Seminar for the Members of Parliament has been an eye – opener and has had the output the Chamber had expected. ***In his closing remarks, the Chairman of the session said," Me and my 32 colleagues have been to the mines tour, what we saw is the kind of investment that our country needs".***

The Chamber will continue with similar interventions in future to raise public awareness on what the mining industry is all about.

1 ☐ Tax and Mining Policy

Project Overview

Presented by

Dr. Lucie Phillips, Chief of Party

ESRF Parliamentary Workshop

Dodoma, November 8-9, 2003

2 ☐ Goal: Sustainable Mining-driven Development

- **USAID-funded project, believed to be the first to recognize that mining drives development**
- **Budget $1.6 million over 2.5 years**
- **2001-2004**

3 ☐ Supports Tanzania Government's Mineral Policy

- **Vision of dynamic, well-organised mining sector led by private investment**
  - **Large- and small-scale mining coexist**
  - **Both legal, safe and environmentally-sound**
  - **Contributing over 10% of GDP**
  - **Developed gemstone lapidary industry**
  - **Providing employment for Tanzanians**

4 ☐ Focus on Country Strategy

- **Country and investors both face opportunities and risks**
- **Most analyses concentrate on investor risk**
- **Countries also need to analyze their opportunities and risks**
- **New mining is a major economic transition**

5 ☐ SWOT Analysis of Tanzania's Mining Sector

6 ☐ Country Risks in Mining Development

- **Dutch disease—Mining can squeeze out other sectors**
  - **By generating influx of foreign exchange**
  - **Making currency strong and exports expensive**
  - **Generating inflation**
- **Greed can bring out unethical elements, foreign and local**
- **Political conflict, dangerous if armed forces or mercenaries allowed to be involved**
- **Civil war in several countries (e.g. Sierra Leone, Angola, Nigeria, Liberia)**

7 ☐ How the project addresses policy and capacity-building

1. Review and dialogue on tax policies
2. Review and dialogue on government use of income from mining
3. Diversification to create jobs and value-added up- & down-stream
4. Mining extension to artisanal sector on environment, management and mine safety
5. Computer skills for all partners and trainees

8 Partners in the Project

- Chamber of Mines
- Tan Discovery
- Economic and Social Research Foundation
- Ministry of Energy and Minerals
- IBI, with USAID funding

9 Reviewing the tax policies

- Goals
  - Reliable tax policy, yielding appropriate revenue levels—now 13% of GDP, 15-17% normal
  - Widening Tanzania's narrow tax base
- Communications tools
  - Websites—TRA, TCM, MEM
  - Manual for taxpayers and auditors
  - Stakeholder workshops
- Training for TRA on tax theory & computers

10 Mining Tax Revenue Investment Strategy

- **Government must invest for future, because minerals are depleting resources**
- **Revenue increase is now, short to medium term**
- **The Economic and Social Research Foundation (ESRF)**
  - developing revenue forecasts
  - proposing investment strategy
    - Cater to special needs of impacted communities
    - Develop value-added chain
    - Invest for long term, infrastructure, education, health

11 Diversification of economic activities

- Value-added activities
  - Gemstone training (tumbling, cabochon, faceting)
  - Jewellery making—wire-wrap master craftsman
  - Entrepreneurship
  - Suppliers to mining industry
- Businesslike approach to training empowers trainees
  - Training advertised to public
  - Trainees pay part of costs

12 Cottage Jewellery Industry=Value Added Chain

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13 Addressing environment and safety in small-scale mining

- Big companies have international standards
- Small-scale and artisanal more complex
- Project pilot tested outreach materials
- Assists MEM extension work with small miners on environment and safety
- Has identified model miners, moving from artisanal to small-scale investor approach

14 Improving Understanding

- Mutual understanding between Tanzania small-scale miners and international companies
  - Each brings different benefits to Tanzania
  - Legal coexistence feasible
- International understanding, e.g. Tucson Protocols for legal tanzanite trading
- Public awareness of the benefits of mining

15 Asanteni sana!

- For further information contact us:

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www.ibi-usa.com

Trip Report
October 2003 Mission

The mission was undertaken from 05 October 2003 to 22 October 2003.

SO 9 Team Meeting
Henry, COP Phillips and Program Manager Nyelo traveled to Mbeya on 6 October for the SO9 Team Meeting on 7 October and 8 October. During the meetings, the IBI Team had a chance to meet with other members of the SO9 Team, learn about their projects and present the TTMP. Also, the SO9 participants toured the project work of Enterprise Works and Techno Serve. These projects were all agricultural based. On 9 October, the IBI Team traveled back to Dar es Salaam.

During the course of this meeting, IBI learned that the other SO9 Team members had turned their PMP numbers into dollar values. In effect, project impact was being measured not by PMPs but by dollars invested by USAID and the return on that investment. After the meeting, IBI set about the task of turning its PMP numbers into dollar values for the annual and final reports. Henry worked extensively on this task with Nyelo and other TTMP team members.

Economic and Social Research Foundation (ESRF)
IBI met with ESRF on 13 October to make comments on the draft mining investment strategy document, and discuss potential dates for the stakeholders' workshop. IBI offered substantial editorial guidance to ESRF on the draft study. A follow-up meeting occurred on 14 October, ESRF staff spent the majority of the day with IBI. This time together allowed the draft study to take shape further. Both ESRF and IBI understood that the study had the opportunity to drive national policy as mining investment was a hot topic in the country at the time.

A number of probable dates were discussed for the potential stakeholders' workshop. At the time, IBI and ESRF agreed to check with the speaker of parliament in order to see when members of parliament might be able to attend the workshop. At the time of the mission, a date was not scheduled for a workshop.

Tanzania Chamber of Mines (TCM)
On 15 October to 16 October, TCM held its mining awareness public education workshop for members of the media including print and television. IBI and the major international mining companies split the expenses for the workshop. On 15 October, the mining companies chartered a plane and flew 35 people to the Kahama and Geita Gold Mines. The mine tour allowed the journalists and a few members of parliament to see first-hand how large-scale industrial mining occurs. For many of the 25 journalists, this was the first time they had viewed a commercial mine in operation.

On 16 October, TCM and IBI sponsored a day long educational workshop on the positive effects of mining. The workshop was opened by the Minister of Energy and Minerals and he participated for the majority of the day. At the event, journalists learned about the mining law, the mining tax framework, the effects of mining on the economy and the positive role that mining can play in the country's development. Program Manager Nyelo presented on the positive impacts of mining to the economy and COP Phillips highlighted the IBI project.

TanDiscovery

Phillips, Henry, Nyelo and Sezinga met extensively throughout the entire mission to discuss the activities of TanDiscovery. In addition, Henry worked with Sezinga to plan the second wire wrap training, the faceting training and work towards turning PMP data into verifiable dollar amounts. These meetings happened throughout Henry's time in-country. The wire wrap training was scheduled for late November 2003 and the faceting training for early December 2003.

Henry and Nyelo attended a workshop held by TanDiscovery on behalf of UNDP on 20 and 21 October. The workshop focused on the role of small scale mining in poverty alleviation. Henry participated in the workshop and explained the role of the IBI project in assisting small scale miners. Henry attended most of day one and only the last session of day two due to other TTMP business.

Ministry of Energy and Minerals (MEM)

COP Phillips, Henry, Program Manager Nyelo and TanDiscovery's Sezinga met with the Permanent Secretary (PS) of the MEM on 10 October. The purpose of the meeting was to review the projects activities to date and discuss potential future work together. The PS expressed the gratitude and support for the work of the TTMP. He felt the project had made great strides in a number of areas related to his Ministry.

Tanzania Tax and Revenue Authority (TRA)

On 13 October, COP Phillips, Henry and Nyelo met with Commissioner of Income Tax Kassera to discuss the final IBI-TRA training and the tax payers manual. The IBI-TRA training was set for early December 2003. The purpose of the training was to be the practical application of the best practice theories that were part of the initial IBI trainings. Commissioner Kassera agreed to the trainer that IBI had selected to undertake these trainings. The Commissioner agreed to the composition of the tax payers' manual. At that time, the Commissioner felt that the new tax code would pass parliament in December and become law in January. IBI agreed to proceed with the initial steps for manual preparation. At the time, IBI stated that the manual would only be produced if a new law was in place by the end of the TTMP.

On 21 October, Henry met a second time with Commissioner Kassera. At that meeting, the final stages were agreed upon for the early December TRA training. TRA selected Arusha as the training site. TRA agreed to pay all travel and per diem expenses for the training. IBI agreed to pay for the trainer, training materials and training room.

Program Management Unit (PMU)

On 13 October, COP Phillips conducted a meeting of the entire TTMP Team. The various components of the team were represented by R. Sezinga-TanDiscovery, T. Mwasha-

TCM, F. Mhondo-ESRF, Phillips and Henry-IBI and G. Nyelo-MEM. Unfortunately, the TRA representative could not attend the meeting. The purpose of the meeting was to access the successes and failures of the project over its two year life span. Each team member reviewed what had gone well and what had gone poorly. The general themes of the meeting appear in the annual report.

On 21 October and 22 October, Henry worked with the Nyelo and Bukuku of the PMU to begin the process of project closeout. All inventories were updated and prepared for submission to USAID. All financial information was updated and prepared for USAID. Finally, an equipment distribution plan was developed to give the USAID TTMP equipment to MEM and TRA.

USAID

Beyond the SO9 Meeting, Henry did not met with USAID or the US Embassy personnel during this visit.

Trip Report
February and March 2003 Mission

The mission was undertaken from 3 February 2003 to 06 March 2003 to continue training on data management training and web site access to data, with TRA, MEM and TCM.

Ministry of Energy and Minerals (MEM)
[Database and Web site Development Training, ongoing 3 Feb. 2003 – 5 March 2003]

After consultation with Program Manager, Nyelo, MEM assigned responsibilities to Dr. Kafumu and Daniel Mwaigobeko of the Statistics Department to participate in a web page and database development training. An initial meeting was held between IBI computer specialist, Shannon McCafferty; Program Manager, Godwin Nyelo; and MEM Statistician and geologist, Dr. Kafumu, on the development of the new site to be located at www.madini.org. The site domain and server space was purchased by IBI with project funds before McCafferty's arrival to Tanzania.

During the meeting, participants agreed on a broad outline of the web site which would include general information about the Ministry incorporating its legal structure, licensing regulations, fiscal policy, and regional contact information. It would also include a section for public consumption which includes licensing procedures, a description of licensing forms and how to download them from the website, and a geological survey of the country. Additionally it would include a section for investors that would provide useful web links about Tanzania such as an overall assessment of mineral occurrences, investment opportunities, important ministry contacts, the different types of licenses and descriptions of them, and tourist information.

In addition to these pages, a statistical database will be available on the web site and will provide information in both numerical and in graph/chart form. This information will cover gold, diamond, gemstone, industrial minerals, and building material production, yearly export statistics, as well as estimated mineral projections within at least two years.

McCafferty initially met with Mwaigobeko and Dr. Kafumu over the course of six days. McCafferty used a manual she developed specifically for the training along with a CD of software exercises in order to teach basic uses of the web page development software and also to guarantee the lessons could be repeated and taught to others at the conclusion of the course. This allowed students to repeat the lessons several times in an easy to use manual that covered essential material to building a web site with the software that is available to MEM. During the training with MEM, McCafferty worked closely with Mwaigobeko while Dr. Kafumu, who had several conflicting engagements throughout the training, followed the manual on his own and achieved similar results. Both students learned how to create a new web folder where documents, files, images, and html pages would be stored on their computer. Students learned how to create pages, add text, hyperlinks, images, and various other features of the software.

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Mwaigobeko and McCafferty by the conclusion of the initial manual training had created a working web site consisting of approximately ten pages with information available to be uploaded to the server. After a brief separation, Mwaigobeko continued developing the site while McCafferty continued the training with the Chamber of Mines (TCM). After a few days, McCafferty met again with Mwaigobeko to monitor his progress while on his own. McCafferty then developed additional exercises for the students which paid particular attention to areas where the students were weak or felt that they needed more instruction.

McCafferty then followed up with Mwaigobeko off and on for three additional weeks and instructed him, along with Mr. Nyelo, on how to load the pages to the host server and practiced site maintenance with them. In addition to instruction of site maintenance, the students were instructed on adding email users to the server and how to access emails using the web host's website. This way the assigned users who will be responsible for checking the accounts associated with the web site will be able to access their email regardless of where they are located. Dr. Kafumu participated in a Ministry meeting in Dodoma and discussed the new web site with officials there. Nyelo, Mwaigobeko, and McCafferty arranged for a meeting with the Permanent Secretary of the Ministry of Energy and Minerals, Mr. Patrick Rutabanzibwa, in order to present the web site and review it before publication. The meeting was however cancelled last minute due to conflicts in the Permanent Secretary's schedule.

USAID / PMP
[SO9 Partners Meeting on PMP, 13 February 2003 – 14 February 2003]

McCafferty, Nyelo, and Sezinga attended a meeting with USAID for PMP activities involving outstanding items related to the collection of indicator data as well as the procedures and processes for recording, storing, and forwarding data. The first day of the meeting covered the performance monitoring plan within USAID's managing for results approach.

[PMP Meetings on Tuesday, 18 February 2003 and Wednesday, 19 February 2003]
Nyelo and McCafferty met privately with Arturo Martinez of DAI-Bethesda Tuesday afternoon to go over the Tracking system that DAI/PESA is developing for the purpose of collecting aggregated data for SO9 partners. Martinez explained the tracking system in detail and requested data from the project within two weeks of the meeting in order for DAI/PESA to begin processing raw data and also to refine the recording mechanism.

Nyelo and McCafferty also met privately with Carolyn Barnes to discuss IR9.1. Barnes had been given a copy of IBI's data table and current PMP in order to make suggestions as to where indicators belonged in the table in accordance with the goals of USAID.
Suggestions under IR9.1

1) Move Indicators 7-16 regarding IT training out and possibly shift to Sub-IR 9.2.3 Business Information expanded
2) Leave Sub-IR9.1.1 Indicator 3 for DAI
3) Some items in 9.1.1 to be shifted to 9.1.2

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Before departure McCafferty requested a meeting with USAID to discuss program activities regarding this trip. McCafferty met with Dan Moore and Nuru Mtulia and was able to show the initial stages of both TCM and MEM newly developed sites and discuss issues with Mr. Moore regarding how the site would keep track of visitors, the database that would be available on the web, and basic details of the training. Additionally Mr. Moore invited the students to participate in a USAID sponsored intensive web development course using Dreamweaver later this spring.

Tanzania Chamber of Mines (TCM)
[Database and Web site Development Training, ongoing 17 Feb. 2003 – 4 March 2003]

McCafferty met with Tina Mwasha of TCM regarding the establishment of a new website for the Chamber of Mines. Previously the web site was designed, constructed, and maintained by a web designer in the UK. The principal goal of the training was to instruct Ms. Mwasha in FrontPage 2002 software, guide her in professional web page design, and instruct her in website and email maintenance.

McCafferty and Mwasha used a manual that was later subsidized with handouts and exercises that allowed the student to develop and practice the skills on her own. While the new site was constructed using different software and encompassed a new look, the content would remain relatively similar to the previous site but with updated information as well as more detailed information about the Chamber. The most prodigious change is the statistical database that TCM had originally organized using Microsoft programs such as Excel, Word, and PowerPoint and will be later added to the website. Much of the training involved learning techniques on integrating the software programs so that the database could be successfully copied to the website for public distribution. The database content focused on mineral production including gemstones, tanzanite, gold, diamonds, cement, and various other materials. The online database will also provide information on specific mining companies including contact information and with the approval of the Chairman and Chamber members, production and export data. Additionally, Mr. Jengo and Ms. Mwasha would consult with mining companies who are Chamber members to ensure that the chamber data is accurate and consistent with current company data.

McCafferty discussed with Mr. Jengo whether IBI would purchase space for the Chamber or if he would make arrangements. He met with Council members on Friday, February 28th to discuss this issue. The last site was purchased from a UK web server and was approximately 10MB in size. McCafferty advised Mr. Jengo to upgrade to at least 100 MB and add emails for the Chamber's office staff. The Chamber would like to maintain its current domain name of www.chamberofmines.com.

Tanzania Revenue Authority (TRA) – Follow up on Computer Training in Excel

McCafferty met with TRA member, Mr. Ngomeni, and agreed to arrange a meeting for Monday, March 3rd in order to discuss further IT training needs for TRA members.

McCafferty and Mr. Ngomeni spoke with several individuals in the income tax department as well as the office of information systems.

Mr. Ngomeni, McCafferty, and Mr. Mfanga, Technical unit of the Income Department, discussed the previous training conducted in August 2002 with Professor Shukla. Mr. Mfanga elaborated on his experience and requested that IBI provide additional computer training in excel in addition to the specialized training of technical staff on taxation in the mining sector. Mr. Ngomeni and Mr. Mfanga proposed holding a week long course in Arusha that would precede the specialized training so that students could continue with excel at an advanced level. Mr. Mfanga in particular thought it necessary to go over complex formulas that would pertain to advanced theories of accounting and taxation for mining. In addition, he suggested that it would be good if the project sent someone to visit the sites for TRA offices in order to see things on the operational level; how participants are performing.

Mr. Ngomeni and Mr. Mfanga also mentioned that computer training for TRA staff is not as successful as it could be because there are limitations with equipment. They addressed this concern mostly concentrating on the lack of computers for students to practice with. McCafferty pointed out that the project budget precluded IBI to promise additional computers. McCafferty then suggested that those regional technical officers who attended the first training in August at ESAMI who have lap tops would be given priority to the computer training during the follow up specialize training on taxation in the mining sector so that those students could practice the newly acquired skills.

McCafferty and Mr. Ngomeni also met with TRA Income Tax Commissioner, Patrick Kassera. Mr. Kassera addressed his concerns regarding the follow up with Professor Shukla and Professor Glenday to the training that occurred in August 2002 at ESAMI. He informed McCafferty that the participants had prepared a document which provided feedback for the course on shortcomings of taxation in the mining sector. The document also provided recommendations for the next class including the need for clear case studies and techniques for examining accounts of a mining company. As well, Mr. Kassera seemed unclear as to when the course would be scheduled and reflected on inefficiency in communication between the Professors and TRA.

In response to McCafferty's requests regarding computer training, he asked IBI to provide a documentation of these proposals with clearly stated objectives in which case the department could choose which activity it seemed important to pursue such as a course on excel offered to participants in the specialized training and/or a separate course for other technical staff at the headquarters in Dar es Salaam. Mr. Ngomeni stressed his concerns that in addition to the extra computer training in excel for past participants; a second course should be offered for non-participants so that there is consistency in knowledge and computer aptitude within the department. He justified this request by adding that people are often transferred and they would also need the skills. McCafferty informed the Commissioner that she would follow up on TRA's request and send documentation for further information on computer training to Professor Shukla and IBI

Program Manager, Patrick Henry and suggested that if it possible, Professor Shukla could precede his class with training with a short course in excel.

TRA, Department of Information Systems

McCafferty and Mr. Ngomeni then met with Mr. Nyalusi of the Department of Information Systems as well as the Director, Mr. Machange. Mr. Machange explained the situation regarding TRA's web site. Ms. Sophia Mwaijonga, Manager of Office Systems, was sent to the UK for a one week training course in web page development and software. She currently administers the web site located at http://www.tra.co.tz and is responsible for putting information for all departments on the web site. Mr. Machange said that as far as training is concerned, his unit would appreciate training an additional one to two people to administer the web in case of Ms. Mwaijonga's absence, as well as more advanced web features including the ability for tax payers to file online.

Additionally the department would like to see the development of an internal website that is only used by TRA members for the sake of storing documents online and updating notices. Or, they would like to keep a portion of the website for private internal viewing amongst staff that would be protected with authorization passwords and would hold templates for office use. McCafferty discussed these matters additionally with Ms. Mwaijonga and she welcomed the idea of additional training as well as the training of an additional web administrator. Ms. Mwaijango also said that TRA was in the process of increasing the public awareness of taxation on its site. This included putting instructions on how to fill out tax forms on the internet with access to forms including the ability to download them from TRA's site. In general, it appeared that TRA has a functioning IT department with a competent web mistress who is cognizant of public needs and who is willing to learn more with regards to web design and development. She did stress that they handle technical aspects of the web site and the web content comes directly from the departments themselves. She then advised McCafferty to speak with the Director of Tax Payer Education Department, Mr. Mmanda, with regards to web content on public issues.

TanDiscovery

McCafferty met with Mr. Sezinga, Director of TanDiscovery, on several occasions to discuss the PMP as well as to consolidate training dates for the gem tumbling workshop. Before her departure to Tanzania, McCafferty spoke with Cabochon specialist, William Roberts, of Atlanta, Georgia and finalized a letter of contract that was sent to him February 1st 2002. Roberts agreed to do the training in Morogoro, Tanzania for two weeks and advised IBI on what materials to purchase for the workshop. IBI intern, Rehema Chanji, has been following up with Roberts and Hi-Tech Diamond Corporation located in California for the shipment of cabbing machines and additional workshop supplies. Mr. Sezinga, Mr. Nyelo, and McCafferty agreed on the dates for the workshop to be March 31st to April 13th and informed Roberts in mid-February. Sezinga requested that Roberts in the meantime submit a synopsis for the course in addition to any knowledge he has regarding gemology specifically that with respect to Tanzania.

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1 Tax and Mining Policy

USAID Closeout briefing

Presented by

Dr. Lucie Phillips, Chief of Party

December 15, 2003

2 Goal: Sustainable Mining-driven Development

- **USAID-funded project, believed to be the first to recognize that mining drives development**
- **Budget $1.6 million over 2.5 years**
- **2001-2004**

3 Supports Tanzania Government's Mineral Policy

- **Vision of dynamic, well-organised mining sector led by private investment**
  - **Large- and small-scale mining coexist**
  - **Both legal, safe and environmentally-sound**
  - **Contributing over 10% of GDP**
  - **Developed gemstone lapidary industry**
  - **Providing employment for Tanzanians**

4 Mining is like the goose that lays the golden egg

- Some countries eat the eggs
- Other countries eat the goose for dinner
- Others fight over her, tear off her wings, legs, head; then fight one another for the scraps
- We cannot keep her alive forever
- But can build for the future by converting resource capital into human capital

5 SWOT Analysis of Tanzania's Mining Sector

6 Country Risks in Mining Development

- **Dutch disease=Mining can squeeze out other sectors**
  - **By generating influx of foreign exchange**
  - **Making currency strong and other exports expensive**
  - **Generating inflation, hurting those not in mining**
- **Greed can bring out unethical elements, foreign and local**
- **Political conflict, dangerous if armed forces or mercenaries allowed to be involved**
- **Civil war in several countries, Sierra Leone, Angola, Nigeria, Liberia, both Congos**
- **Tanzania aims for Botswana, Ghana model**

7 Project worked to maximize benefits, minimize risks

1. Review and dialogue on tax policies
2. Study and workshop on government use of income from mining
3. Diversification to create jobs and value-added up- & down-stream
4. Mining extension to artisanal sector on environment, management and mine safety
5. Computer skills for all partners and trainees

8 Partners in the Project

- Ministry of Energy and Minerals

- Tanzania Revenue Authority
- Chamber of Mines
- Economic and Social Research Foundation
- Tan Discovery
- IBI, with USAID funding
  - Godwin Nyelo, Seconded as Project Director

9 ☐ Reviewing the tax policies

- Goals
  - Reliable, transparent tax policy, better revenue yield—now 13% of GDP, 15-17% normal
  - Widening Tanzania's narrow tax base
- Communications tools
  - Websites—TRA, TCM, MEM
  - Manual for taxpayers and auditors
  - Stakeholder workshops
- Training for TRA on tax theory & computers

10 ☐ Mining Tax Revenue Investment Strategy

- **Government must invest for future, because minerals are depleting resources**
- **Revenue increase is now + short to medium term**
- **The ESRF study**
  - developing revenue forecasts
  - proposing investment strategy
    - Mining impacted communities—HIV/AIDS
    - Develop value-added chain, supplying companies, ore and gem processing, jewelry
    - Invest for long term, in infrastructure, education, health

11 ☐ Diversification of economic activities

- Value-added activities
  - Gemstone training (tumbling, cabochon, faceting)
  - Jewellery making—wire-wrap master craftsman
  - Entrepreneurship
  - Suppliers to mining industry
  - Processing gold in-country
    - Geita Gold Mine offering small processing unit

12 ☐ Results of gemcraft & entrepreneurship trainings

- 12 new jewellery businesses with 35-40 full-time employees (1st training only)
  - Avg farming wage in Tanzania = $1 per day
  - Avg wage for jewelry making jobs = $2-$6/d
  - Est. $40,000/year income from 1st training
  - Est. $500,000/year from all four + entrepr.
  - 2 wire-wrap, 1 cabochon, 1 master cutters

13 ☐ Cottage Jewellery Industry=Value Added Chain

14 Addressing environment and safety in small-scale mining

- Big companies have international standards
- Small-scale and artisanal harder to enforce
- Project pilot tested outreach materials
- Assists MEM extension work with small miners on environment and safety
- Has identified model miners, moving from artisanal to small-scale investor approach

15 Results of mining extension, 1.5 years

- 206 new SMEs created in small scale mining industry (holding legal primary mining licenses)
- 10,000-18,000 direct small scale mining jobs created with project assistance,
  - support services 40-50,000
- 14 new businesses, with about 50 new jobs, provide goods and services to formal mines
- 621 small scale miners trained in environmentally friendly practices and safer mining techniques

Starting point in 1995: 550,000 employed in artisanal mining

16 Economic impact of small-scale mining=jobs, jobs, jobs

- Mine workers avg $10/d—vs. $1/d farming
- Earnings are spent and invested in rural communities, recycling ca. 6 times/year
- Miners working with project inject TZS11 bn-TZS 22 bn per year directly into rural economy
- Artisanals' incomes more sporadic, est. at least TZS 275 bn in 1995 (TZS2500x200dx550,000 miners)

17 Economic impact of big mining

- Investment more than $1.3 bn (TZS 1.3 trillion) since 1997
- Tax revenues $2.4 m in 1997 reached $37 m in 2002 (TZS 2.4 bn~$37 bn)
- Jobs, over 7000, well-paid, safe
- Training of technicians and professionals
- Roads, electricity, water supply, housing and community development

18 Improving Understanding

- Big mining could easily squeeze out small.
- Coexistence fragile
  - Each brings different benefits to Tanzania
  - Legal, orderly coexistence feasible
- International understanding, e.g. Tucson Protocols ended boycott, threat to Tanzania's good name
- Public awareness of the benefits of mining

19 Asanteni sana!

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TRACKING TANZANITE

Tucson Protocols Status Report

By Lucie C. Phillips, Ph.D.,
International Business Initiatives

For the American Gem Trade Association,
Jewelers of America, Inc., and
The Jewelers' Vigilance Committee

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Executive Summary

The strikingly beautiful blue-purple zoisite gem known as tanzanite recently experienced a market crisis provoked by unsubstantiated allegations of terrorist involvement in the trade.

The Tanzanite Summit held at the Tucson Gem Show February 8–9, 2002 gathered experts from throughout the world, all of whom testified that there was no evidence that terrorists are involved in tanzanite. The summit nevertheless established protocols to tighten controls on the trade. The protocols aim to ensure clean, verifiable transactions throughout the global chain involved in tanzanite production. The Tucson Protocols call for mining, marketing, processing, manufacture, and sale of tanzanite jewelry to be conducted by registered firms, each of which warrants that its sources are legitimate. Firms must be able to identify their suppliers in case of an investigation. The key countries involved are also to keep better statistics on tanzanite exports and imports.

Summit participants in the United States established a task force, headed by the American Gem Trade Association, to implement the protocols. The Jewelers of America, Inc. and the Jewelers Vigilance Committee are key members. The task force engaged a firm to handle communications and another to coordinate the project.

Tanzania, currently the sole known source of tanzanite, sent a large ministerial delegation to the summit. Immediately upon his return from the summit, the Minister of Energy and Minerals convoked stakeholders and announced three measures: (1) creating committees to establish more thorough documentation procedures for miners, dealers and exporters; (2) naming a Merelani Reconciliation Committee to settle any differences among stakeholders in the mining area; and (3) drawing up and issuing regulations to implement the Merelani Controlled Area Act.

The U.S. task force traveled to Tanzania in April 2002 to consult with Tanzanian counterparts. They met with each major stakeholder group and visited the mining area. After witnessing an export shipment being processed at the zonal mines office, they proposed that language referring to the Tucson Protocols be inserted on export permits and certificates of origin. They also recommended that dealers' warranties (see Annex 1) accompany each shipment. Every subsequent firm selling rough or processed tanzanite needs to provide its own warranty until the product reaches the consumer.

Several American jewelers have recently returned to the market. It is still important, however, to follow through now by providing appropriate documentation at each step in the production and marketing chain and keeping better statistics.

Crisis, The Tucson Tanzanite Summit, and the Protocols

The elegant blue-purple zoisite gem known as tanzanite had been growing in popularity in the 1990s, particularly in American markets. It is a fairly rare gem, with only one known source in the world: a five-square-mile area in the hills of Merelani, 10 miles south of the Kilimanjaro International Airport, between Moshi and Arusha in Tanzania.

Problems struck the tanzanite market in the fall of 2001, due to allegations in a *Wall Street Journal* article that its trade was linked to the terrorist organization al-Qaida. The article named several prominent jewelry retailers that offered tanzanite to their customers and asserted that selling tanzanite indirectly supported al-Qaida. Other media repeated and embroidered upon the theme, but without adding any evidence. The named jewelers, and several independents, withdrew from the market. International prices of the gem fell sharply. Although the allegations were unsubstantiated and, in fact, later contradicted by intelligence experts, the possibility of such an unsavory link galvanized the global industry.

The American Gem Trade Association, the Jewelers of America and the Jewelers Vigilance Committee called a summit February 8–9, 2002, at the Tucson Gem Show. Tanzania's Minister of Energy and Minerals participated, as did the Permanent Secretary of the Ministry, the Commissioner for Minerals, the Tanzanian Ambassador to the United States and the United States Department of State. Private meetings leading up to the summit revealed that the Tanzanians were dismayed by the allegations for two reasons. First, they had suffered from al-Qaida terrorism themselves when the U.S. Embassies in Dar es Salaam and Nairobi were bombed in 1998. They had been tracking al-Qaida activities closely ever since and had sympathized greatly with Americans when the World Trade Center and Pentagon were attacked. Secondly, the drop in the tanzanite market was casting a pall over the entire economy—with both tourism and mining down sharply throughout northern Tanzania. Unemployment had shot up as mines stopped working and small businesses languished. The Tanzanian Minister of Energy and Minerals and the Ambassador addressed the summit gathering, stressing these points.

The U.S. State Department requested intelligence reports from all services in preparation for the summit. The State Department spokesman assured participants that all intelligence sources agreed that there was ***no evidence of that al-Qaida was currently involved in the tanzanite trade***. A private New York jeweler took the initiative to obtain the trial records of an al-Qaida operative named Wadih el-Hage, who was convicted in the bombing of the U.S. Embassies in Nairobi and Dar es Salaam in 1998. El-Hage is the only link ever mentioned as associated with tanzanite. The trial records, including the defendant's private diaries, allowed dealers to satisfy themselves that el-Hage had not ever succeeded in penetrating the trade, although it was clear that he had tried to do so from Nairobi in 1995. El-Hage's lawyer confirmed that his client had attempted to enter the tanzanite trade as a small broker between 1995 and 1997 but had never succeeded in becoming a factor in the market.[1] Trial records and the diaries show that el-Hage first attempted to earn a living by starting a refugee relief organization. When that failed, he tried marketing anything that could be exported from East Africa, including hides, sesame seed, meat and many other products.

[1] Joshua L. Dratel, letter to Michael Avram, January 31, 2002.

Representatives of the international jewelry industry explained to summit participants that, although they were satisfied that tanzanite was not currently supporting al-Qaida, they proposed taking measures to make it very difficult in the future for any unscrupulous person to be involved in the trade.

The Tanzanian Mineral Dealers Association (TAMIDA) assured participants that it knew everyone trading tanzanite and no one had ever heard of Wadih el-Hage. The Arusha Regional Miners Association (AREMA), represented by several Tanzanian small-scale miners, and the international tanzanite mining company agreed that he was unknown to them.

Representatives of India's gem industry testified that they would enlist the participation of the thousands of small gem cutters working on tanzanite in the Jaipur area of India to ensure that the tanzanite industry is entirely clean.

Researchers responsible for a study of Tanzania's minerals trading testified to summit participants that its findings had been misrepresented in the press. There had been smuggling in the 1990s, mainly through nearby Nairobi. This was mainly because Nairobi dealers at that time were convenient, well capitalized, and tax-free. But in the late 1990s, the Government of Tanzania strengthened the mining policy framework and the licensed dealer system, attracting the great majority of the trade through legitimate channels. Through policy action, Tanzania seemed to have avoided the conflict-diamond syndrome.

Summit participants agreed on measures known as the Tucson Protocols to ensure that all tanzanite is traded through legitimate channels by licensed dealers (see box). The measures were endorsed by the Government of Tanzania, the American Gem Trade Association, the Jewelers of American, the Jewelers Vigilance Committee, the TAMIDA, AREMA, AFGEM, the Tanzanian Chamber of Mines, the American Gem Society, the Manufacturing Jewelers and Suppliers of America, the International Color Stone Association, the Jewelers Association of Jaipur, the Indian Diamond and Colorstone Association, and the two researchers present. The Federation of Mining Associations of Tanzania indicated its adherence by e-mail.

Task Force at a Block D Mine

THE TUCSON PROTOCOLS STATE THE FOLLOWING:

Recognizing that:

- While it is now confirmed that there is no evidence to support allegations of an ongoing connection between the tanzanite trade and smuggling to support terrorism, we abhor the mere possibility of such a link and believe that recently published allegations warrant action to restore confidence in tanzanite;
- The tanzanite trade provides widespread economic benefit to many people in Tanzania and elsewhere, and promises increased economic benefits to all in the international community who mine, trade, cut, polish, set and sell tanzanite;
- The government of Tanzania has taken and continues to take significant steps to safeguard this gemstone by licensing both those who mine it at the source and those who trade within Tanzania, and by designating what is currently the sole tanzanite deposit as a controlled access area in order to ensure the integrity of the legitimate sources of tanzanite and realize the economic benefits of the internal trade within Tanzania; and
- A cooperative effort is needed to provide assistance to all of the countries and persons involved in this trade through a shared approach to improve transparency and accountability in the supply chain, thereby providing the widest possible protection of the legitimate stream of commerce in this gemstone;

The above named governments and associations commit, with the endorsement of the U.S. Department of State, to the following concrete first steps to institute a practical and effective means to eliminate concerns about the tanzanite trade, its alleged connection to funding terrorism, and to restore confidence in tanzanite:

1. A detailed ongoing analysis of the market chain for tanzanite to determine what improvements can be made to prevent possible abuses in the manner in which this product is brought to market;
2. A cooperative effort among governments and industry to strengthen and maintain a system of oversight, control and law enforcement for the movement of tanzanite from the mines to the point of first export in order to protect the legitimacy of the trade;
3. A system of warranties, in cooperation with the government of Tanzania, provided in writing and used by first exporters and all those in the downstream chain of commerce, which will state that the tanzanite bought, sold, cut, polished, set or otherwise traded came from legitimate sources;
4. Implementing the Tanzanian government's new plan to establish Export Processing Zones (EPZs) which anticipates the inclusion of the tanzanite industry in the EPZ scheme as a priority;
5. All subsequent traders after first export should only accept tanzanite that is accompanied by the appropriate written warranty; and
6. Sellers of tanzanite, or jewelry containing tanzanite, should require the appropriate written warranty from their suppliers.

Instituting these steps will provide the basis for consumer assurance needed for this gemstone. Moreover, we believe that long term planning to promote greater economic development of all aspects of the gemstone trade in Tanzania will have the added benefit of encouraging the integrity of the trade. Therefore, we will implement the concrete steps outlined above and participate in long term planning for economic development along with international agencies and Tanzanian representatives.

IMPLEMENTATION

After the summit, participants immediately took steps to implement the protocols. Implementation starts, necessarily, with the mining area in Tanzania and the first export. Each sale thereafter needs to sustain the chain of documentation, including importers, cutters, polishers, calibrators, jewelry manufacturers, wholesalers, and retailers.

Implementation in the United States

In the United States, the Tucson participants set up a task force with the following structure:

- Fund-raising Committee
- Retail Committee
- Technical Committee (responsible for designing the documentation format and process)
- Tanzania Committee
- International Committee
    - East and Southern Africa (Tanzania, Kenya, South Africa)
    - South Asia (India, Sri Lanka)
    - Asia (Thailand, Hong Kong, Singapore, China, Japan)
- Europe/Middle East (Germany, Israel, Emirates, others)
- Americas (United States, Canada)
- Project Coordination
- Communications Management

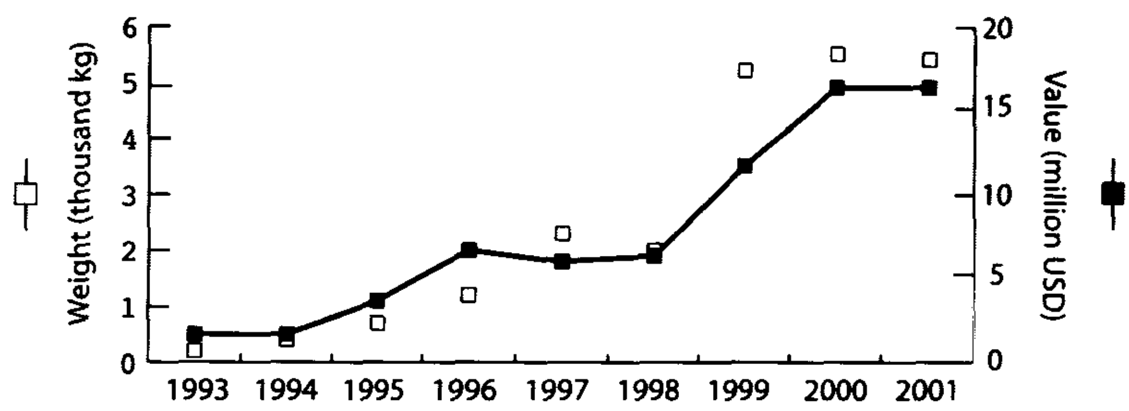
The American Gem Trade Association heads the task force. The Jewelers Vigilance Committee has taken the lead on the Technical Committee, while Jewelers of America coordinates the Retail Committee. Richard Krementz of Richard Krementz Gemstones, LLC, heads the Fund-raising Committee. The task force engaged IBI-International Business Initiatives, which, with U.S. Agency for International Development funding, has provided research and technical assistance to the Ministry of Energy and Minerals since 1996, to coordinate implementation, particularly between the United States and Tanzania. Another firm was enlisted to handle communications.

American jewelers wrote to their suppliers immediately after the Tucson Summit, asking them to certify that the stones they had provided in the past had originated in Tanzania from legitimate registered dealers. The dealers in Tanzania responded with letters providing that assurance and numbers of the relevant export permits.

The State Department and the U.S. Embassy in Dar es Salaam continue to monitor intelligence findings related to gem mining and trading, as does the Tanzanian government.

Initially the U.S. jewelry industry was slow to recognize the potential impact of the Protocols. The negative publicity that had inspired the Tucson Summit continued to reverberate through television, talk shows and regional press. Jewelers continued to withdraw from the market as the rumor spread. That trend changed after the U.S. task force visited Tanzania in April 2002 and learned of serious efforts well under way to strengthen security there.

Figure 1. Declared Weight and Value of Tanzanite Exports



Implementation in Tanzania

Tanzanite was discovered by Jumanne Ngoma in 1966 and promoted in international markets beginning in 1967 by Tiffany's of New York. Some 200 to 400 kilograms per year were mined for four years from three private mines. But in 1971 the Tanzanian government nationalized all mineral production. Under State Mining Company (STAMICO) management, tanzanite production dwindled, as did gold and other gem mining. Beginning in 1983, the government gradually began reopening mining to both small-scale and international mining. When it announced the decision to open Merelani (also spelled Mererani) to small-scale miners in 1986, the miners did not wait for the regulatory framework to be put in place. They occupied the land and began mining.

By the time the first international mining company visited the tanzanite mines in 1989 some 30,000 people were on site. The government divided the deposit into four blocks, each approximately 1 mile square. Blocks A, B, and C were awarded by tender to formal mining companies. Block D was divided in 1991 into plots of 50 meters on a side, and awarded on a first-come, first-served basis to some 200 applicants. Demand for plots continued intense. In 1995 Block B was divided up and another 200 small plots were awarded to small-scale miners. In the meantime, artisanal miners who missed out on plots in block B and D invaded Block C, which had been awarded to an international company in 1992, but was not yet being actively mined. SAMAX Ltd., a London-based company, planned to mine both the tanzanite and surrounding graphite using open pit methods. It was never able to mobilize sufficient capital to begin mining.

By 1998 SAMAX folded, and KPMG/Nairobi liquidated its assets. AFGEM won the tender for the original license, with the support of the Industrial Development Corporation of South Africa and a debt-for-equity swap with the African Development Bank, SAMAX's major creditor. The South African company established a local company, Merelani Mining Ltd., with a Tanzanian chairman of the board. It prepared an environmental impact statement, rebuilt the roads and water supply, and constructed a processing plant. In 2001 it began mine development and exported its first tanzanite. It is training sorters and cutters in Tanzania, but for the present is doing most cutting in South Africa. There have been tensions between large- and small-scale miners, particularly over plot borders and marketing strategies.

From mine to market, tanzanite follows diverse channels. Claim-holders for small mines share production with the mine gangs who work their pits. Normally the claim-holders market the workers' 25–40 percent share as well as their own take. If the workers do not agree on the price offered, the two parties go together to a dealer in Arusha to see whether a better price is available. Some pieces are hidden by workers in the mine and disposed of later to small brokers, who move them quickly out of the area. Other times gemstones are missed in the sorting and are found later in the tailings by scavengers. Their finds are usually consigned to small brokers, who sell them and take a commission.

The licensed dealer system in Tanzania evolved slowly, as the Mining Act of 1978 did not provide for private firms to sell minerals. It was not clear, when the decision to liberalize mining was made in 1983, what mining and marketing system would provide a viable free-market replacement to the state monopoly. Zonal mines offices began registering claims, but sometimes the central ministry issued international prospecting and exploration concessions that surrounded them. The ministry licensed dealers and brokers, but the regulations and taxes on them were cumbersome at first. By studying the actual operations of the sector, the ministry developed a viable new system.[2] Parliament passed a new Mining Act in 1998, which provides for both Tanzanian small-scale mining and international large-scale mining.

Merelani Mining Ltd. exports its production directly to South Africa in a company plane. It buys tanzanite, both rough and cut, from local miners, generally offering higher prices than local dealers for top quality material. It plans to brand the top 10 percent of its production with its Tanzanite Foundation logo and market it as superior quality. Small miners object to that strategy, as they see it as demeaning their own production.

Declared exports of tanzanite grew strongly after 1998, totaling 5,473 kilograms in 2001. Policy reforms attracted trade to Tanzania that had formerly gone through nearby Nairobi. Since that time many Nairobi dealers have set up operations in Tanzania. International dealers report that Nairobi is no longer a major source of tanzanite. Understatement of export values by legal dealers remains a common problem.

Both Kenya and Tanzania suffered from al-Qaida terrorism when the U.S. Embassies in those countries were bombed in 1998. Most of the more than 250 deaths were Kenyans and Tanzanians. The two governments tracked down the perpetrators, with U.S. assistance, and both have continued to keep a close watch on suspected al-Qaida sympathizers.

Tanzania Takes Measures to Secure the Tanzanite Trade

The Tanzanian delegation to the summit began work immediately upon its return home in a three-pronged action to protect tanzanite trade. One was an effort at reconciliation between large- and small-scale miners. Tensions between them were believed to have fueled negative publicity. They needed to be resolved, in any case, for implementation of the Tucson Protocols to proceed smoothly. The second effort was work, mainly within the Ministry of Energy and Minerals and TAMIDA, to determine the procedures, documentation, and specific language to be used to establish a traceable chain of documentation from mine to consumer. The third front involved interministerial preparations to implement the Merelani Controlled Area, limiting access to the mining area.

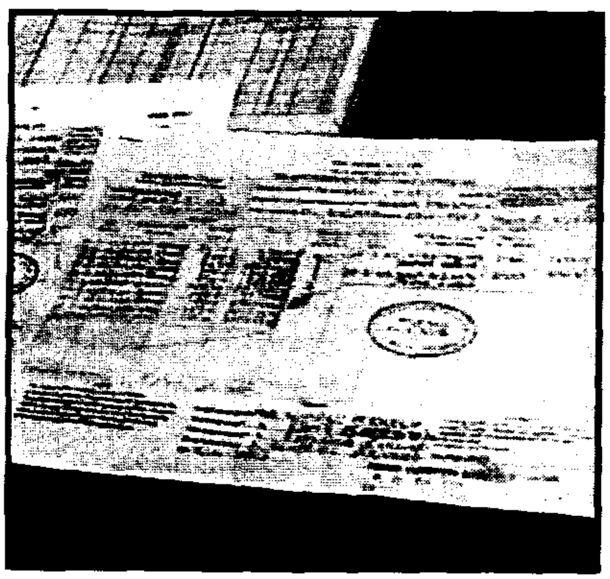
The Minister of Energy and Minerals called a meeting of all stakeholders in Arusha in late February 2002. He described the crisis in the tanzanite market, the events of the summit, and the determination of his government to clean up the

[2] The most recent studies of mining and marketing in the 1990s include: Lucie C. Phillips, Haji Semboja, G.O. Shukla, Rogers Sezinga, Wilson Mutagwaba and Ben Mchwampaka, *Tanzania's Previous Minerals Boom: Issues in Mining and Marketing,*" USAID/Economic and Social Research Foundation/International Business Initiatives, 2001; and Tan Discovery Minerals Consulting/World Bank, "Preliminary Report on Baseline Survey and Preparation of Development Strategy for Small Scale and Artisanal Mining, 1996.

trade. He created the Merelani Reconciliation Committee, headed by a retired general. It was to meet with all stakeholders, arbitrate their differences, and arrive at a formula for peaceful coexistence. The committee submitted its report to the Minister for Energy and Minerals in May 2002; the report will be released to the public shortly.

Tanzania's Parliament had already passed legislation establishing the Merelani Controlled Area for the area of tanzanite deposits in April 2001. The law stated that only primary mining license-holders and their employees would be admitted to the mining area. The ministry has drafted regulations to implement the law and released them to stakeholders for comment. It is also defining administrative and budgetary requirements. The draft regulations call for building and staffing a new police station and a new mines office at Merelani and adding mine wardens in the mines and police checkpoints on all three roads leading to the Merelani Controlled Area. The draft regulations require miners within the controlled area to fence their block, providing a single access gate.

The government is also preparing to document the tanzanite trade more rigorously. Ministry personnel from Tanzania have participated in the Kimberley process for cleaning up the diamond trade. Knowing those procedures, they see the tanzanite trade as substantially less complicated. The export permits already bear a unique identifying number, which can be tracked through cutting, polishing, setting, etc. Two major export destinations, India and South Africa, already require certificates of origin, so dealers know the procedures for obtaining them.



Export permit

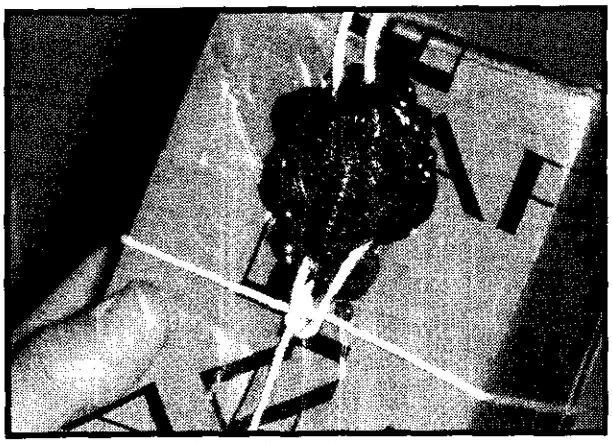
U.S. Task Force Visits Tanzania

The U.S. tanzanite task force visited Tanzania April 6–12, 2002, to discuss means of implementing the protocols and ensure that Tanzanian documentation will continue through the marketing chain without complications.

The Minister of Energy and Minerals welcomed the U.S. task force and updated them on reforms under way. The ministry also expects that Export Processing Zone legislation, currently before Parliament, will allow cutters and jewelers to do more processing in Tanzania. The ministry is also drafting changes in the 1998 Mining Law necessary for implementing the Tucson Protocols. It plans to present them to Parliament at its next session, June–August 2002. He asked that the task force stay in contact with the Commissioner of the Ministry of Energy and Minerals on implementation.

The U.S. task force met in Arusha with the ministry personnel who are revising its procedures and documentation for tanzanite exports. Together they reviewed the current documentation, including export permits and certificates of origin. They compared documentation and procedures to the standards agreed upon by international experts involved in the Kimberley Process for Diamonds. Every export permit bears a unique identifying number and carries all of the information required on Kimberley process permits. Certificates of origin are issued by the

Chamber of Commerce, and are already required by two of the major importers, India and South Africa. The U.S. task force suggested that the following—or similar—language be added to them: "The tanzanite in this shipment was mined in Tanzania and has been handled in accordance with the provisions of the Tucson Tanzanite Protocols." Certificates of origin, which are now issued only for South Africa and India, should be issued for all destinations. The ministry distributed the task force suggestions to stakeholders for comment.


Wax seal on a tanzanite export parcel

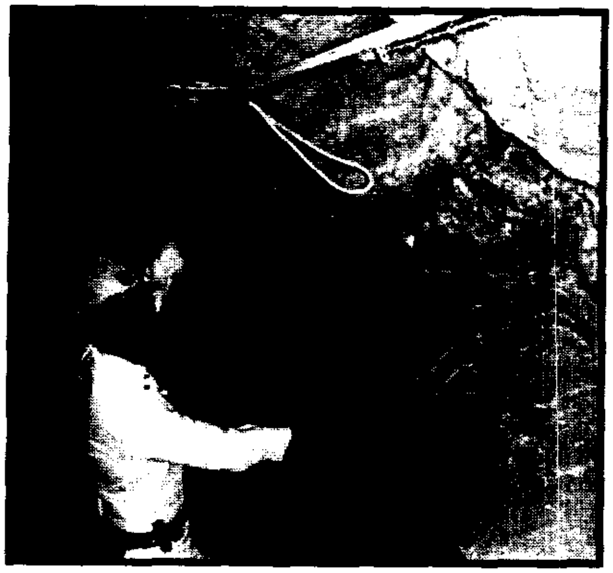
The Zonal Mines Officer in Arusha gave the U.S. task force a view of procedures for documenting the tanzanite trade, from ledgers kept by dealers to the sealing of shipments for export. The procedures seemed appropriately thorough, although everyone agreed that under-invoicing is a continuing problem. The ministry and dealers have discussed the fact that the crisis in the market shows everyone that more rigorous observance and enforcement of existing procedures is needed. The task force found also that shipping containers should be more tamper-proof than those used now. And more thorough and detailed statistics should be kept on tanzanite exports.

The task force also met with TAMIDA, which had already created a committee to prepare its response to the Tucson Summit. It was agreed that dealers will be required to provide warranties to their customers stating that, "The tanzanite herein invoiced was mined in Tanzania and has been traded through legitimate sources. The seller hereby warrants, based on personal knowledge and/or written guarantees provided by the supplier of this tanzanite, that the proceeds from the sale of this tanzanite were used for legitimate purposes."

To protect the confidentiality of dealers' supplier base, which is recognized proprietary, each such warranty needs to cover a single transaction. The system of warranties must be universally applied to be effective. The identity of sources of supply will only be required when requested by a duly authorized government agency. Miners should certify to dealers that their sources are legitimate. Dealers certify the same to their customers, who are often importers involved in cutting and polishing. Cutters certify to jewelry manufacturers, manufacturers to wholesalers and wholesalers to retailers.

TAMIDA plans to take a more active role in assuring international inquirers of the legitimacy of its members. It would also like to network with the international industry as local dealers develop their cutting and polishing capacity. They are actively seeking training, investment, and used equipment from international partners. They pointed out that sales directly from Tanzania to jewelry manufacturers would effectively eliminate opportunistic adventurers.

The dealers reported, as had international dealers and the Government of Tanzania, that the direction of trade has changed in the last five years. In the early to mid-1990s, much tanzanite went directly to Nairobi. The government realized that multiple taxes applied to exports were driving the trade out of the country. It eliminated most export taxes, including even royalty on cut stones. Only rough stones pay a 5 percent royalty. Now the majority of Tanzanian gem production is exported



Task Force leader Hucker shows tanzanite pocket

through legitimate channels from Tanzania, and very little flows through Nairobi.

AREMA representatives met with the task force and explained the history and practice of mining at Merelani. The miners, many of whom are also dealers, indicated that they support the Tucson Protocol-implementation measures, notably the fencing of mining blocks at Merelani. They are also interested in staying in contact with expatriates interested in tanzanite. They welcome joint-venture investors, as they are chronically short of capital for mining. They would also like training in mine construction, safety, health, and gemology.

The U.S. task force visited Merelani Township and went into both small- and large-scale mines. The township is several miles distant from the mining area over a rough dirt road. Since 1996, it has grown from a shantytown to a modern city with multistory hotels and well-stocked shops. It has suffered an economic downturn lately due to the depressed market for tanzanite, but it still bears witness to the tens of thousands of Tanzanian livelihoods that depend on this gem.

Jobs are a major consideration for miners and for the government. Tanzanian government policy is to keep small-scale mining developing even as international mining companies are beginning operations throughout the country. An estimated 550,000 jobs were created in small-scale mining alone in the first five years after small-scale miners were given access. In a country with only 1.1 million salaried jobs, this was a major factor in reducing rural poverty. International mining companies bring another important set of benefits to the country: investment, technology, and intellectual capital. They bring fewer jobs, but the work is more skilled, safer, and better paid.

Key Jewelers Return to the Market

Since the return of the U.S. task force from Tanzania and its positive report on action there, several American jewelers have returned to the market. Zale Corporation and many independent retailers have studied the situation and approved the measures being put in place to protect their business integrity.

WORK CONTINUES

The job is not yet done. The task force realizes that enlisting the cooperation of a vast network of small businesses worldwide involved in mining, trading, cutting, polishing, setting, and selling tanzanite jewelry is a daunting task.

The task force now plans to publicize the proposed warranty system throughout the industry so that all firms can use the proper forms and procedures. An international communications campaign will be needed. American and European jewelers need to inform their suppliers that they will require written warranties on every consignment, and to provide them with a sample(see Annex 1). Tanzanian dealers need to begin providing the same documentation to their customers. The task force is working through industry contacts and shows to inform Indian, South African, Kenyan, and other intermediary countries' firms of the proper form and procedures for warranties.

Implementation of some of the mining and marketing controls in Tanzania will take several more months, as the cooperation of several ministries is required and the measures will entail substantially higher budget allocations for the foreseeable future. The U.S. task force will remain in contact and plans to visit Tanzania again in August 2002.

The task force will also review periodically the statistics on exports and imports at each step to estimate the success of the effort to move all trade through legitimate channels.

The task force will keep in touch with intelligence services to ensure that any terrorist or other illegitimate uses of the market are eliminated. As of May 2002, the State Department continues to state that all intelligence services report no evidence that al-Qaida is marketing tanzanite.

Dealers can begin issuing warranties immediately. A draft warranty document is in Annex 1 of this report. It may take some months before every firm follows the chain of warranties, but firms anywhere in the chain can begin complying now.

Customers want to wear their striking blue-purple tanzanite jewelry again, confident that it is produced by people of integrity throughout the world.

ANNEX 1. PROPOSED DEALER WARRANTY

Every sale of tanzanite, whether rough, polished, or set in jewelry, should be accompanied by the following statement:

The tanzanite herein invoiced was mined in Tanzania and has been traded through legitimate sources. The seller hereby warrants, based on personal knowledge and/or written guarantees provided by the supplier of this tanzanite, that the proceeds from the sale of this tanzanite were used for legitimate purposes.

Quality A, weight ____________________ Other qualities, weight ____________________

Date of sale ____________________ Place of sale ____________________

Number(s) of original Tanzanian export permit(s) and certificates of

origin ____

____

This statement may either be typed on the invoice accompanying the merchandise or on a separate sheet of paper bearing the seller's full address and telephone number

Annex 2. The Global Marketing and Processing Chain

At export tanzanite typically goes to different destinations depending on whether it is cut or rough, top quality or lesser quality. Top qualities (A to AAA), which are deep blue with a slight purple cast, generally go to the United States, Germany, or South Africa. Much of the material is already mine cut. It may be recut before setting. Lesser qualities, which range from lighter blue to light purple, go mainly to the Jaipur area of India for cutting. Some goes through Kenya or Dubai, which are readily accessible from Tanzania. Small traders favor these destinations, as they can buy duty-free or low-duty goods with the proceeds of their sales and resell the consumer goods upon their return. Some tanzanite also goes to Thailand, Israel, Hong Kong, and other destinations.

U.S. jewelers estimate a yield of cut stone from rough of about 18 percent. Indian cutters average slightly higher yields. A rule of thumb is that 1 gram of rough yields 1 carat of cut stone (5 carats=1 gram).

Value is added in numerous steps as stones go through the marketing and processing chain. The original dealer/exporter adds value by sorting and selecting parcels that will suit particular clients in different parts of the world. From the mine production that they buy, dealers eliminate stones that cannot be cut because of inclusions or other imperfections.

Since small firms all over the world cut gems of differing qualities, it would be extremely difficult to evaluate the annual value of the wholesale cut-gem market for tanzanite. Estimates that have appeared in the press range widely and appear to be speculative.

The retail market for tanzanite is equally difficult to evaluate. In addition to the stone itself, retail jewelry has value-added from the gold, silver, and/or diamonds that go into the final piece of jewelry.

Figure 2. Tanzanite Export Destinations, 2001