Solution for illegal gold mining using blockchain

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The Problem Today

The biggest issue today is there are too many hands involved in the gold trade and no reliable central tracking system. From mining to retail, there are just too many chances for corruption. In order to make an impact on illegal Gold mining we need to limit those involved throughout the process, add transparent information along the way and create a record from the very beginning.

It all starts with the miners……

Miners

Solving illegal gold mining starts at the mining level.

Today governments issue permits to allow the legal rights to mine the minerals in the ground. Instead of issuing a paper permit, The government can issue rights to use a permission based blockchain app.

This app would allow the legal miners to input their data and create a tracking system for their products. Differentiating legal and illegally mined goods.

This would create a digital stamp of information, Pictures, GPS locations, quantities, notes and transportation data and forever stamped into public view.

This information will be inputed into a Blockchain in the back end, the user would have no knowledge of such being used and would be interacting with a user friend smart phone application.

Blockchains cannot be changed or altered or hidden. By putting the mining data into the blockchain right from the beginning we will have a clear transparent system to build upon as the process moves along. This prevents everyone bypassing this step and give illegal miners no option to add supply into future steps.

This would also allow the legal miners to have access to a market place where they can directly connect to smelters, by passing the #1 area of corruption, trading houses….

Connecting miners to smelters weeds out corruption and competition and would allow the miners to sell their product at higher prices.

Trading houses

After mining the next step in the gold trade for most local miners is the trading house, often times multiple trading houses. This is where you'll find majority of the corruption when it comes to illegal gold. How do these traders determine whats legal and whats illegal. These traders can easily melt both legal and illegal gold together and pass along to bigger trading houses with the stroke of a signature. This process is hard to regulated for governments but Fortunately this process is outdated.

Trading house will become a thing of the past. They are the trusted middle man in a paper system thats no longer needed with a trusted blockchain ecosystem.

However smelters might want to continue to hire traders to locate products.

Traders in this ecosystem still need to be permitted by the government in order to access the app. This could be a trading department inside a smelters organization.

A trader buys gold from the miner and then trades to another party. Each transaction triggering data input into the blockchain. A trader would now have a hard time adding illegal gold into the mix as everything is transparent they bought 20 grams trying to sell 40 grams. Where did the extra come from? There would be no data for the extra 20 grams.

Smelters

Smelters don’t have time or resources to locate small amounts of gold locally, so they rely on local, regional trading houses. Well that is no longer the case.

Smelters now can have direct connections to local miners via the apps marketplace

The blockchain based app can also handle small or large payments across borders without the need of third parties. While keeping track of accounting.

A smelter locates a miners products on the app and creates an offer, the miner accepts the offer and a smart contract is created.. funds from the smelter go inside that contract. Once the product is evaluated and received. The funds inside the smart contract gets released to the miner.

The miner sends the products using the same traditional ways of transportation but with a QR code attached*… creating a tracking system for government to catch illegal products.

By connecting the smelters to the miners, miners can now sell their products for a much higher premium, and smelters can now buy for a much lower cost. Also in this process the Government can implement a tax and take a fee!!!!! WIN WIN WIN ..unless your the trader

Smelters unlike trading houses are limited and have lot of equipment and lots of overhead for their operations, making them much less likely to want to use the illegal gold trade or steal funds from the local miners and risk losing everything. They also wouldn’t be able to claim more gold then what they have received as they dont have previous data of where extra products came from. They shouldn’t have the ability to add mining data into the app.

Jewelers and retails and the rest of the cycle

Today this is where the least of the corruption is. By the time the gold gets past the smelters, jewelers and retail, no-one has any idea where the gold came from. Most of the illegal gold is mixed in with legal gold.

With a simple scan of a QR code a customer can see the whole lifecycle of where the product came from

Miner -> smelter -> jeweler -> retail shop

Access to pictures, origin, company information, dates, prices, grading data. Etc all with a simple scan and be confident that the data provided is true.

When the product is sold, once again a new block of data should be inputed. Giving ownership to the customer, like a digital receipt, all tracked but that QR code. Preventing jewelers or retail shops from selling the same product multiple times with the same code.

FAQ

-In order for this to work, who implements it?
Government would have to force the use of such system, sounds harsh but they already require all parties involved to be registered and permitted. This is just a digital version of such.

-How can governments protect the transportation of products?
Gold is a metal and easily found with metal detectors at shipping distributions centers. They would need to prevent illegal gold from leaving its borders or shipping networks, the simple solution is all products being shipped need a Qr code attached. This opens the process to be tracked and secure as only legally permitted miners/smetlers/jewerls have permission to write data into the QR code. All products being shipped without a code should be held for investigation of origins.

-How do you prevent someone from stealing the products during transportation?
Gold today is highly valuable and hard to track. Theft is big and its easy to trade. If the gold were to get stolen in the process from the miner to the smelter. The thief wouldn't have anywhere to sell the gold as they dont have a contract or access to the smelters, jewelers. They are not permission inside the ecosystem. All that amount of gold would be unaccounted for, say that same amount winds up at the border heading to a different destination than stated on the QR code and investigation shall be opened and gold should be returned.

-What other tools can be used within the blockchain ecosystem?
All parties now have a transparent open system of the entire life cycle, recorded on the blockchain. With the abilities to run API's scanning the data, businesses now can implement tools for easier record access and accounting for their businesses !!!!

Governments can run API's scanning data on GPS locations of miners, making sure they are within permitted ranges.

A real time PUBLIC record of what should be moving across shipping departments and accurate untampered addresses

-What are the benefits for parties implementing such system?
Governments have more oversight over the process. Gets a tax on the trading, can ease the process of tracking and securing the supply chain, can limit the amount of hands involved. Can shift focus on miners and protecting the environment.

Legal miners have less competition, without the sell pressure from illegal gold entering the markets. They cut out the traders and have direct access to smelters acquiring much higher premiums for their products.

Smelters have direct access to the miners, lowering their cost massively. Smelters would need to ramp up their receiving department as they would be receiving hundreds of small packages vs large quantities from large trading houses. Although Scanning the QR in app makes receiving and accounting much less hassle than a paper base system

Retail can now have the confidence about what they are buying isnt illegal, doesnt support corruption, isnt supporting damage to the environment.

-What are the cons?
Illegal miners are out of a job, they no longer have access to sell their products, or move their products around. Will force them to follow the laws and regulation. better protecting the environment and limiting organized crime.

Trading houses are also out of a job. There isn’t much need for local trading houses, as miners can directly access smelters for better rates.

Summary

This is what the future could look like when implementing blockchain into the life cycle of gold.

How we go from A to B lies the opportunities.

Create this ecosystem and sell it to governments/ businesses

Create a market place for this trading between miners and smelters… the app can be a API fed from the marketplace exchange

Update the regulatory branch of the governments who works directly with legal miners on new technology.

More insight needed on a grading system that acts in the miner/smelter process may be needed to prevent corruption and allow minting of tokens. Might be apart of the smelters receiving department. Or could be a contractor of government acting as a middleman validating the smart contract.