

Unveiling the Green Mirage -The Dark Side of Cobalt

Investigating Inadequate Sourcing, Human Rights Abuses, and Environmental Impacts

By Ciprian George Popa

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"Empowering a Greater Future, Rising as One"

United Rising (UR) is an organization fostering collaboration toward the well-being of the planet and its habitants from a sustainable holistic point of view.





I have an intrinsic drive for uncovering the truth - here comes my passion for investigation and reporting.

Researching various topics that pique my interest comes naturally to me. A critic by default, I am also an optimistic enthusiast and a dedicated team player. Therefore, my ultimate goal is to become a sustainability journalist.

My passion for sustainability matters started ever since I was studying it in business school. Here, I got intrigued by how companies engage in greenwashing to artificially meet the societal demand for a green transition.

I believe that the values of the organization are aligned with my aspirations. It's an honour to be part of UR's efforts to educate the youth and a wide audience. My role here is to uncover and share extensive information on the existing sustainability gaps in global markets and shed light on the unethical practices employed by companies that we, as consumers, support through our purchasing decisions.

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Introduction

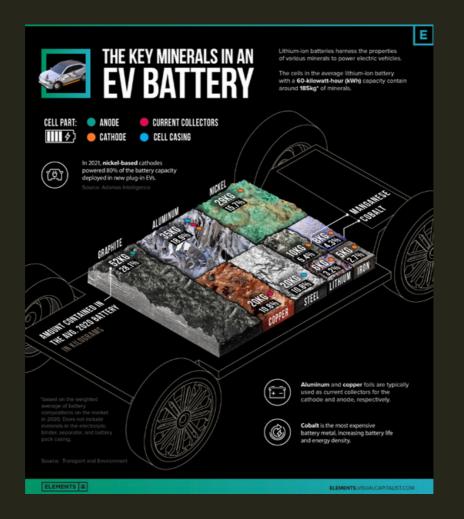
In our collective pursuit to address pressing global challenges, reducing hazardous activities has become imperative to safeguard the health of our planet. This priority resonates at international levels and is publicly evident through the UN SDGs and the European Union's Green Deal, which strive to achieve climate neutrality. While the end goal is noble, it prompts us to question whether the means employed are always equally virtuous.

United Rising aims comprehensively to assess our resource management practices in the quest for climate neutrality, emphasizing the importance of sustainability for human resources and environmental stewardship. We cannot remain idle in this growing issue, whilst more and more factual data reveals a different side of the green revolution of cars, which presents a dark side of cobalt - previously undisclosed. This article delves into the profound implications of the surging popularity of electric cars and mobile tech that contain cobalt & lithium batteries. While the concept of utilizing such technology holds promise for sustainability, it is crucial to delve deeper into its hidden ramifications.



Society's roaring call for a sustainable tomorrow is met by the global market's "Game-Changing" answer: Empowering rechargeable technologies driven by Cobalt & Lithium batteries.

Lithium-Ion batteries have become increasingly prevalent and it's likely that you're already familiar with their central role in the ongoing discussion. What is not so commonly known although, is the diverse composition of minerals found in electric vehicles - variating based on purpose and manufacturer Graphite (28%), Aluminium (18%), Nickel (16%), Copper (11%), Steel (11%), Lithium(3%), Iron(3%), Cobalt (4%) and Manganese (5%) are all mineral components utilized. In fact, the green revolution of the automotive industry owes much of its success to the unique electrochemical properties of cobalt-lithium batteries.



That is because, not only do these batteries remain cool and reduce the risk of fires, but they also significantly extend the lifespan and energy density of a battery. Some car manufacturers even claim up to a decade of usage, users can now enjoy more miles per charge and benefit from an extended battery lifespan. Due to the benefits brought by advancements in battery technology, EVs have surpassed phones and become the biggest solicitor of cobalt in the world in 2021, with a buying estimate of around sixty thousand tonnes yearly - amounting to 34% of global demand.

Cobalt, once relegated to the realm of colouring porcelain, has now become an indispensable and in fact - the most expensive component in the batteries that are powering our phones, laptops, and more importantly - electric cars. This can be attributed to a heavy reliance on global sourcing of the natural resources of the Democratic Republic of Congo (DRC). Indeed, as research revealed, 75 % of the world's cobalt is being now mined in the DRC. That is because the country has around 3.5 million metric tons of this mineral available - placing it as the biggest identified source to this day. For this particular reason, the DRC is naturally attractive to the world's biggest investors in cobalt mining, but not limited to this degree. There are multiple levels of financial stakes and political substrates involved in the mining of cobalt, as you are about to find out.



<u>The realities of "sustainability" in</u> <u>the cobalt industry</u>

Are we truly making progress toward a sustainable future, or is this just an illusion? Are there looming, hidden costs; and are negative consequences greater than the advancements we are making towards a carbon-neutral society? Are we witnessing an immense case of greenwashing?

Whilst battery producers present Cobalt as a more sustainable alternative to traditional batteries, investigations on the supply chains of this industry have identified many inefficiencies in the process to attain it. It is estimated that around 30% of the Cobalt mined in DRC is inadequately sourced from so-called "ASM" operations - artisanal or small-scale mining. Most of the ASMs are dug by hand and administered in a chaotic manner, and the locals here are working in hazardous and inhumane conditions. In the tunnels, the absence of safety measures and equipment is alarmingly evident, posing significant risks to the miners. The oxygen levels are so dangerously low that people have to go in multiple times for short periods so as not to asphyxiate. Moreover, the mineral that is sourced from such places is practically impossible to trace once it gets mixed in the supply chain alongside other lawfully-sourced Cobalt.



"The artisanal mining industry in the Democratic Republic of the Congo is rife with forced and child labour. unreported deaths and human rights abuses" writes and academic modern slavery researcher Siddharth Kara in his new book Cobalt Red

- Siddharth Kara (Kara, 2023)

Losers & Repercussions

People of Congo and the Country's Environment

The people of Congo and the country's environment bear the devastating consequences of artisanal mining operations, which are truly devastating. Additionally, to the work conditions in ASMs, which can only be described as horrific, the extender human rights abuse that is associated with such artisanal operations, goes far beyond imagination. The numbers of these abuses are overwhelming and demand urgent attention! Artisanal mining in DRC contributed to the incomes of around 10 million people, amounting to 16% of the country's overall population. are too many cases in which the tunnels of the ASMs collapsed and killed workers, out of which many involved were children - as young as 7 years old. An estimate of workers killed by artisanal mining each year in the DRC is 2000 per year.

A horrific testament collected by Siddharth Kara during one of his many visits to the DRC shows the unbearable reality of the status quo: Priscille – a Congolese woman who, despite the loss of her husband to a respiratory disease resulting from artisanal mining, is grateful to god to have had two miscarriages because in her own words says that "Here is better not to be born". What's worse? This heart-wrenching reality is compounded by the high risk of birth defects faced by parents who worked in a cobalt mine and are exposed to the dust and polluted air that surrounds these areas. The picture above shows the hell which citizens of the DRC have to go through to make a living if they live in cobalt-rich regions.

As disclosed by Vox Media in their <u>podcast</u>, cobalt is the "blood diamond of batteries". This statement is not set far from the truth, especially when looking at how mining operations are being managed. Additionally, since product from artisanal mines, notorious for human rights abuses, is not banned from the supply chain, local collection points in mining villages appear. whereby workers sell their ores. The product is further sold to the "cobalt market" – which is in reality a multitude of illegal shacks set alongside main roads in the proximity of mining areas. One important note here is that according to the law, only Congolese people can buy cobalt; however, these disclosed by Vox Media in their <u>podcast</u>, cobalt is the "blood diamond of batteries". This statement is not set far from the truth, especially when looking at how mining operations are being managed. Additionally, since product from artisanal mines, notorious for human rights abuses, is not banned from the supply chain, local collection points in mining villages appear. whereby workers sell their ores. The product is further sold to the "cobalt market" – which is in reality a multitude of illegal shacks set alongside main roads in the proximity of mining areas.

The cobalt markets that buy artisanal cobalt are being run by Chinese traders. This was revealed in a documentary report conducted by ABC NEWS in Kolwezi. In this area, journalists had trouble getting in with cameras in the region, therefore suggesting that people running those places don't want to have it openly publicized. The footage shows Congolese miners bringing ores and selling them under a supervisor that openly states to be from Beijing. Further, a scene of supervisors that are clearly of Asian descent watch from a secure place encased in glass how Congolese men test the cobalt by hand and without masks - a very toxic process if done without equipment). The video proves a gross disregard by the buyers of cobalt for Congolese workers; whilst at the same time acknowledging the dangers imposed on the health of the supervisors.

According to The Guardian, the environmental impact of cobalt use spams throughout the entire life cycle of the mineral, starting from refineries, battery plants and EVs and tech producers; including in the recycling process and waste dumps. In an article, the sustainability consultant Charlotte Davey suggests that the mining operations of Cobalt are not just devastating the landscapes but also pollute water streams and kill crops that are in proximity. Unfortunately, fish dying due to cobalt and acid contamination of the water streams seems to be a frequent story all across the cobalt belt of Congo. This mineral is proven to be a radioactive element that is also a carcinogen and therefore could be very fatal to all the animal and human lives in proximity to mines, as well as beyond.

Stakeholders & Various Interests

The interests associated with this mineral are found at all levels of the production cycle, starting from the very start of the mining processes to its very incorporation into finalized products.

The biggest interest in **mining** for cobalt in the DRC has been shown by the following companies:

• GLENCORE (Baar, Switzerland)

Glencore is the world's bigger investor in Cobalt, and is a direct owner of KCC in the Democratic Republic of Congo – "Kamoto Copper Company" Despite human rights concerns associated with cobalt mining, Tesla secured a sourcing deal in June 2020 with the giant mining company, for its own lithium batteries production at Tesla's "Gigafactories".

 <u>CMOC Group Limited (owned by Cathay Fortune & Luoyang</u> <u>Mining Group – both listed on the Shanghai exchange in China) in</u> <u>China)</u>

CMOC is the owner of "Tenke Fungurume Mine" in the DRC.

Although it is not among the top-rated mining companies in the world, the CMOC group has been found to have indirect ties to the renowned car manufacturers Renault, VW, Volvo, Mercedes-Benz and again, Tesla.

• Zhejiang Huayou Cobalt (HQ in Zhejiang Province - China)

Zhejiang Huayou Cobalt is the owner of Congo Dongfang International Mining (CDM).

It is the biggest buyer of artisanal cobalt in the DRC and supplies all major tech players in Asia such as Sony & Samsung, but also Apple, Microsoft, Dell and Google, the latter four being all named in lawsuits related to work-related deaths in the cobalt mining industry in the DRC. The most serious allegations involved in the trial are that the companies had "specific knowledge" that the cobalt they bought is being sourced by means of child labour and in treacherous conditions. Less than a week after Sky News Investigation published their material on slavery and working conditions in cobalt mining, Apple publicly announced that they will temporarily suspend sourcing hand-mined cobalt from the DRC.

<u>Note</u>

An important observation here is **BHP Group Ltd**. – the biggest mining company in the world – was created by merging Australian Broken Hill Proprietary & British Billiton (based in Melbourne, Australia) – on the official websites, the company shows no activity on the DRC among its active locations list.

However, the investigation revealed a side story in the press - BHP was reportedly (in 2021) in talks with Ivanhoe Mines in order to acquire their project in the "DRC copper belt" and at the same time, is invested in a separate development with PPES & Toyota Tsusho, to launch a common EV ecosystem. By doing so, the company is drastically shifting from its marked policy of avoiding risk areas and is consciously compromising its ethics; with a visible intent to exploit the Cobalt available in the DRC.



Political Agenda

According to an investigation led by Johnny Harris, Emmy Award winner and contributor to the New York Times, 15 out of the 19 cobalt mines in the DRC are owned by Chinese companies. The journalist stresses the long-term political agenda of the PRC to dominate the global market for cobalt. However, further investigation revealed that the country is not solely focused on processing the vast majority of minerals in order to further sell them, but rather on positioning itself in the dominant global market for cobalt & lithium batteries and thus have considerable authority over the green revolution. In their process of doing so, China is acting in a fashion that is highly comparable to historical colonialism, or at least - is suspected of doing by The Guardian, Business Insider, Forbes, and many other journalists & critics.

The question imposed here is: might BHP Group's entry into the DRC be driven by a political agenda of the Western World to compete against the PRC in the "Cobalt Rush" era? More importantly – are they joining "modern-colonization" practices for the sake of becoming a prominent player in the global "green revolution"? of the Western World to compete against the PRC in the "Cobalt Rush" era? More importantly – are they joining "modern-colonization" practices for the sake of becoming a prominent player in the global "green revolution"?

Current Efforts & Potential Solutions

<u>Is this abuse being ignored by the whole world?</u>

Locals & Domestic Government

It's certainly not by the families in Congo- which suffer the most from the current state of affairs - and who filed a lawsuit against Google, Apple, Dell, Microsoft and Tesla via International Rights Advocates in Washington DC for aiding and abetting in the deaths and serious injury of children who are claimed to be working in the mines pertaining to their supply chains.

Neither it is ignored by the Congolese government - which had quite a brilliant idea in monopolizing the purchase of artisanal cobalt and regulating the industry: In a national effort initiated by Congolese president Felix Tshisekedi, EGC was developed – Entreprise Generale du Cobalt – which holds a monopoly over the sale, processing and export of cobalt that is extracted by artisanal miners in the DRC. This program offered more than two million Congolese miners the chance to legally work in safer conditions. More to that, the EGC announced a floor price that will be set per ton of cobalt ore, so miners can make a better living, together with the introduction of a that transparently traces the delivery of minerals. This system set by the president acts as a way to support the citizens of the DRC and at the same time create profit for the country – with the least harm inflicted on both parties. However, the environmental impact of this initiative is uncertain.

International Traceability Efforts

There are several international initiatives developed to regulate the ASM situation in the Congo:

• Responsible Minerals Initiative (RMI)

RMI has more than 400 companies and associations as members, across 10 industries. Brings together representatives of industry, government and civil society where it informs, guides and holds in-depth discussions with the members on improvement initiatives.

• Cobalt Industry Responsible Assessment Framework (CIRAF)

CIRAF is an assessment tool meant for all companies; whether they produce or source from high-risk countries; based on four risk categories - Environment, Occupational Health & Safety, Human Rights and Community. It is meant to offer a more consistent approach to cobalt due diligence; and to make it easy for cobalt producers and buyers to assess, mitigate and report on adequate production and dangers associated with sourcing. Through CIRAF, participants can demonstrate their alignment with responsible cobalt sourcing and production via mandatory yearly sustainability reports.

• Extractive Industries Transparency (EITI)

EITI Initiative is supported by the International Council on Mining and Metals - a body of 27 mining and metals company members, and more than 35 national, regional and commodities association members across the world. It is an assessment tool for responsible governance of oils & in this case - minerals.

• Fair Cobalt Alliance (FCA)

FCA is focused on DRC's major problem with artisanal mining. It wants to systemically address the roots of child labour associated with artisanal cobalt mining as well as the work dangers implied in it. The alliance strives to foster sustainability in ASM for cobalt, by channelling demand for responsibly-sourced minerals - therefore, advancing the development of the Congo region to a diversified economy that benefits the many people whose livelihood relies on mining. A few of the names mentioned before in this paper decided to join the alliance, such as Tesla, Glencore, Google, and CMOC.

• <u>Responsible Cobalt Initiative (RCI)</u>

RCI was funded in 2016 by the Chinese Chamber of Commerce and the OECD; and it aims to improve supply chain governance, increase transparency and promote cooperation & communication between multiple stakeholders, such as the government of DRC and the civil society - especially affected communities. By having companies align their policies with OECD's and China's Due Diligence Guidelines, the RCI is utilized to assess and implement progressive practices across the cobalt supply chain, and to support affected communities instead of only reducing impact. Only a handful of the companies mentioned early in the investigation are part of this initiative, namely: Apple, Huayou Cobalt, Apple and Volvo.

Is Blockchain the answer to better Global traceability?

Mining companies CMOC, Eurasian Resources Group & Glencore, together with battery material supplier Umicore have developed a blockchain solution for cobalt supply chains in the DRC, named Re-Source. The latter is supported by tech studio Kryha - experts in carbon footprints and metals traceability (recognised for projects with the World Economic Forum).

The program is meant to visibly trace cobalt's entire life cycle, from the mine, up until its end use in an electric vehicle. Therefore, this method will bridge the link between digital flows and the real movements of physical materials on the ground. The solution integrates multiple existing standards and frameworks such as ICMM, RMI, IRMA, CIRAF1 etc. Furthermore, it is trying to trace and disclose the GHG emissions associated with the various operations alongside the value chain of this mineral.

Re-Source is interlinked with the Battery Passport project of the Global Battery Alliance and together is expected to transform the entire supply chain of minerals intended in batteries.



<u>A Shift in Cobalt Sourcing?</u>

A positive example has been set by BMW Group, which decided to take another approach to the problem and stop sourcing from the DRC in 2019. The company simply started procuring its cobalt from other places: 80% of its cobalt and lithium needs are supplied from Australia, whilst the remaining is purchased from Morroco via Management Group. BMW's leadership later announced that they will not exclude the Congo anymore starting with 2025 when they will only source from a list of targeted mines whose names were not disclosed.

A report published by Visual Capitalist reveals that North America has adequate resources of Cobalt to be excavated for (around 60 identified deposits), especially Canada with high-grade mineral deposits such as "Cobalt Silver Queen", "Nova Scotia", "Drummond" etc. In addition, they underline the fact that Bill Gates & Jeff Bezos (both members of the Breakthrough Energy Fund) are financially supporting a startup from Canada that currently utilizes tech to search for data algorithms and patterns to search for Cobalt - actually near a Glencore mine operating in the Quebec area.

It's visible how certain stakeholders about the global cobalt supply chain are shifting their attention to other sources of Cobalt. Is this a sign that the entire global supply is changing? Or is it just individual initiatives to become more sustainable?

Consumers Responsibility?

In a survey conducted by Ascend Elements, it was found that 38% of respondents consider that lithium-ion EV batteries are sourced using destructive mining techniques. At the same time, 37% of respondents did not know that recycled materials from batteries can be used in making new ones. According to Siddharth Kara, author of Cobalt Red, there is little to do as a tech or EV customer besides refusing to buy products made with cobalt to change the current state of affairs.

<u>United Rising's Point of View</u>

Involvement of International bodies

Investigation revealed bodies such as the OECD that are trying to regulate the mineral industry by informing on mitigation and avoidance of risk associated with investing in minerals sourcing & processing in risk areas. However, in its Responsible Business Conduct for Multinational Enterprises, OECD admits to its guidelines not being enforceable by means of law - and that the guidelines are designed with the expectation that companies will simply observe and align with the more sustainable values that it presents.

In 2011, the UN proposed to Congo's leadership, as a result of a postconflict assessment, to promote sustainable wealth creation by a few means, out of which only one was put in place and not less than 9 years later. However, later is better than never, as capitalizing on the country's emerging cobalt economy has proved. Forming the EGC was efficient in bringing better well-being to those whose livelihoods depend on working with or around this mineral in terms of financial prosperity and work conditions. It is uncertain however if this initiative had a notable positive impact on the environment.

United Rising believes that international bodies such as the OECD and UN can and should have a more active involvement in the enforcement of sustainable practices in affected regions such as the DRC, which can do so little to influence an entire, global phenomena that are highly focused on the country's mineral resources.

United Rising wants to shed light on the fact that, it is not solely the duty of co-national politicians of the Congolese miners to stop this atrocity, but rather of the whole world population that benefits off (cobalt)lithium-battery powered devices or vehicles. Indeed, the stakeholders with the greatest responsibility in ensuring a fair green transition that takes into account the intersections of human rights abuses and environmental degradation stemming from activities such as cobalt extraction in Congo are international bodies. The UN and EU, shaping our current legal frameworks such as the Green Deal and the SDGs, possess the authority and influence to propose holistic solutions which encompass the long term on the planet. It is of utmost importance that the implementation of international and EU frameworks aimed at advancing the green transition fully considers the environmental and social injustices stemming from harmful activities. To truly achieve a meaningful green transition, it is hypocritical to focus solely on the effects occurring in the more affluent regions of the globe.

A genuine commitment to sustainability requires acknowledging and addressing the adverse impacts of our actions on vulnerable communities and ecosystems worldwide. Environmental and social injustices are often intertwined, with marginalized communities bearing the burden of ecological degradation and resource exploitation. Therefore, by centring the green transition on principles of environmental and social justice, we can ensure that the benefits and burdens are equitably distributed. This entails actively engaging with impacted communities, listening to their concerns, and incorporating their perspectives into policy-making and decision-making processes.

Furthermore, international bodies should strive to incentivize innovation toward the use of alternative solutions. Not only it is beneficial for addressing environmental and social challenges but also for driving economic growth and job creation.

y further supporting and promoting sustainable industries and technologies, international bodies can help transition economies toward greener and more resilient pathways.

Moreover, the contradiction arises from the lack of strong global sanctions against such practices and the companies involved. International governmental bodies have a responsibility to advocate for a sustainable model that aligns with fundamental principles. These principles unequivocally reject slavery and hazardous environmental activities. By engaging with domestic governments, civil society organizations, and affected communities, stronger sanction mechanisms should be established to hold companies accountable for their actions. This would include mandatory mechanisms to monitor and regulate supply chains, ensure compliance with ethical standards, and mitigate adverse impacts on both people and the environment.

Consumers Authority

Until better resource management policies can the implemented, it is also the responsibility of the consumer to bring the demand for this mineral down, by requiring innovative and more sustainable products that do not affect people or the environment to this degree. Particular choices in our daily lives can impact the global demand for cobalt, even if one individual feels powerless in front of the forces that are in motion on a global market scale.

One small step that each individual can make to positively influence this matter is as easy as utilizing public transportation as opposed to private cars. We believe that the youth has the power to change this world and repair its flaws, which is why we ask our readers to step up and demand their future be sustainable!



This represents a grave injustice and undermines the very essence of our collective efforts to create a better world!

"Many industrial mines in the DRC have processing plants that use massive amounts of sulphuric acid to leach copper and cobalt from ore, which produces a highly toxic, mustard-coloured gas cloud that floats over everything: land, rivers, animal, villages ... and children like these" - Siddharth Kara

Conclusion

All that being said, it's important to realize that whilst electric cars hold the potential for innovation and positive change, the current methods employed in their production are ethically questionable and exacerbate the vulnerability of our environment. What is presented as beneficial for a privileged few often conceals the harsh realities and suffering endured by the many. It is essential to recognize that just because we may not witness the immediate consequences of these practices from our vantage point, it does not make them ethically acceptable, or sustainable.

Exploitation and violence persist, facilitated by the global arena, while environmental degradation transcends artificial borders, affecting us all on a global scale. It is alarming to observe how the concept of sustainability is often used to disguise the exploitation inherent in the production of electric vehicles.



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<u>Final Words...</u>

This publication stands as a testament to the boundless nature of your potential Cip.

United Rising is a nurturing space where this potential can be fearlessly explored, and it brings us great joy to offer you the opportunity to rise together - united in purpose.

Consider this a heartfelt encouragement to embrace the journey ahead. When you show up, life unfolds in remarkable ways. Walk this path without any prejudices or judgments holding you back - you are free to savour each step along the way.

May your endeavours continue to flourish.

Yasmine

Cyril Connolly once said, "Literature is the art of writing something that will be read twice; journalism what will be grasped at once."

Your paper is like no other. Your ability to dive into intricate concepts, investigate, and present them in a captivating and accessible is the best ability that a writer could wish for. This first achievement along United Rising reflects your outstanding devotion as a writer and your commitment to bringing light upon what is not being said.

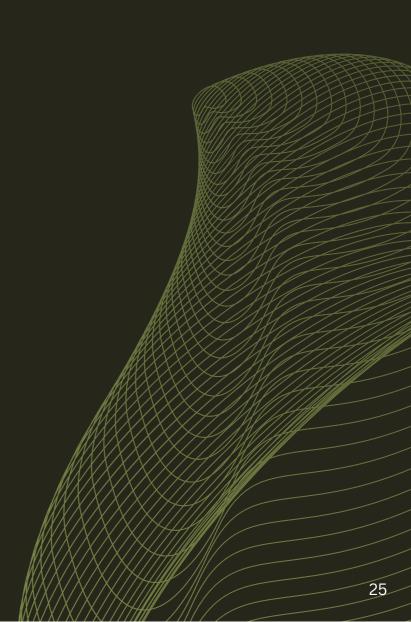
I hope this journey will serve as a powerful motivation for your future endeavours as a journalist, inspiring you to continue exploring your passion for sustainability while creating a meaningful impact through your words.

Keep writing and changing the world, one word at a time!

UR making a shift towards a better direction. I hope this journey will help you get more attentive and attuned to what is going on inside of you.

Keep going, keep growing.

Robert







For ongoing updates, support, and active participation in our collective efforts toward building a more sustainable world, we invite you to visit our website and connect with us on social media.

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