"GREEN HYPOCRISY"

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SIGFRIDO RANUCCI IN STUDIO

From 2035, it has been imposed a ban on selling combustion engine cars. Limited traffic zones are spreading across local administrations; in short, all rush to go electric; however, nobody realises that someone on the other side of the world is paying the price of the environmental improvements of our continent on their skin.

GIULIO VALESINI

Hey, you need to change your truck. This one pollutes.

DRIVER

No, not this one.

GIULIO VALESINI

Why?

DRIVER

We are broke.

GIULIO VALESINI

You might be broke, but the Mayor will no longer let you circulate with that.

DRIVER

We will steal then. We will go back to our previous job, stealing.

GIULIO VALESINI

Come on... But you need to replace this, it's old.

DRIVER

We are broke, man.

GIULIO VALESINI

So, what now? You know that this will be unlawful after a while.

DRIVER

And so, we are outlaw, too; let's steal.

GIULIO VALESINI

Which Euro category is this truck?

DRIVER

Euro zero, look...

It pollutes...

DRIVER

It does.

GIULIO VALESINI

What about the air quality?

DRIVER 5

It's good. Look, we breathe it. It's fine.

GIULIO VALESINI

How old is this car?

DRIVER

It's from 2001. I need to scrap it, in exchange for a new one.

GIULIO VALESINI

Could you have done without it?

DRIVER

Absolutely yes. Before banning cars, I would have strengthened public transport. Or at least added other services. Bans are easy to impose. The difficult part comes with the rest.

GIULIO VALESINI

It's old and polluting, says the Mayor.

DRIVER

Maybe the Mayor can give me the money for a new one.

GIULIO VALESINI

But you should replace that.

DRIVER

We will.

GIULIO VALESINI

You know that, from November on...

DRIVER

I'll go with him. With his official car. Can he drive me to work?

GIULIO VALESINI

What will you do?

DRIVER

I won't replace it.

GIULIO VALESINI

Which Euro category is it?

DRIVER

This should be Euro 2, it should be...

GIULIO VALESINI

Take this one away.

DRIVER

What am I supposed to do? Not working?

GIULIO VALESINI

But cities are polluted, that's the issue.

DRIVER

I know. Pollution makes me sorry, but what should I do? I must go to work.

GIULIO VALESINI

Can't you take public transportation? The bus?

DRIVER

Do you want to take a look at my trunk? All the tools? My work equipment?

GIULIO VALESINI OFF-SCREEN

In Rome alone, 300 thousand vehicles will be outlawed. 51 gates and CCTV systems will be installed around the limited traffic zones. The citizens with polluting cars united to create a committee and collected over 30 thousand signatures in a few weeks.

GIULIO VALESINI

What year is it?

ENRICO INGAMI – CHAIRMAN OF THE NO ZTL COMMITTEE

This is a car from 2005.

GIULIO VALESINI

So, 18 years old.

ENRICO INGAMI - CHAIRMAN OF THE NO ZTL COMMITTEE

Right, 18 years, mechanically speaking, apart from this bump I got from a truck...

GIULIO VALESINI

Is it diesel or petrol?

ENRICO INGAMI - CHAIRMAN OF THE NO ZTL COMMITTEE

Diesel.

GIULIO VALESINI

Euro?

ENRICO INGAMI - CHAIRMAN OF THE NO ZTL COMMITTEE

Euro 4.

But according to the resolution, your car is old and polluting.

ENRICO INGAMI - CHAIRMAN OF THE NO ZTL COMMITTEE

The resolution is based on the mathematical data collected by Arpa Lazio. We examined the actual data and realised that pollutants have halved since 2010. So, the situation is getting better, not worse. Still, they are banning cars.

GIULIO VALESINI

Green limited traffic zones all day long, 24/7. Entering or exiting this area mean breaching the rule. What happens in this case?

ENRICO INGAMI - CHAIRMAN OF THE NO ZTL COMMITTEE

Each time a vehicle passes, a fine of 163 euros applies.

GIULIO VALESINI

And there is CCTV.

ENRICO INGAMI - CHAIRMAN OF THE NO ZTL COMMITTEE

CCTV is installed on each gate, and they record your car. The system sends the fine directly to your home. If you do it twice, the fine rises to over 560 euros. The third time, you get your driving license suspended for one month.

GIULIO VALESINI OFF-SCREEN

New cars are more expensive, and the demand for used vehicles has increased so much that it recorded an average rise of 24% last year, almost 30% over the first semester of 2023.

SANDRO BARCAROLI - CAR DEALER

Prices have risen because it takes a long time to get a new car, so those who want a ready-to-deliver vehicle, even a semi-new car, have to pay more. Prices have gone up. Whereas there was a high production of new, zero-km cars before, those who want a new vehicle today should book it and wait until the factory produces and delivers it.

GIULIO VALESINI

It is almost upon request.

SANDRO BARCAROLI - CAR DEALER

Exactly, it's almost upon request. Prices have changed as fewer discounts apply.

GIULIO VALESINI

Why?

SANDRO BARCAROLI - CAR DEALER

Because factories are making cash.

GIULIO VALESINI OFF-SCREEN

The European Union promotes sustainability and allocates money to fund research projects for private green transport. It gave almost two billion euros to launching electric batteries alone.

ANNEMIE TURTELBOOM - EUROPEAN COURT OF AUDITORS

European funds are mainly devoted to research and innovation and less to battery production. In our report, we found that there is a lack of supervision.

GIULIO VALESINI OFF-SCREEN

A shower of European money went down the drain, including 1.8 million euros spent on an ambitious Italian project that would transform old polluting cars into clean vehicles with reduced emissions thanks to solar energy. That would be the solution for many citizens struggling with the new limits.

SIGFRIDO RANUCCI IN STUDIO

A solution for all those who cannot join the green transition by purchasing a 60,000-euro Tesla. What would be the breakthrough? Allowing those with a lower income to access limited traffic zones for free. How? The idea comes from Gianfranco Rizzo, a university professor in Salerno, who envisages transforming old combustion engine cars into hybrid vehicles with help from EU funds. Mecaprom, a historic automotive and engineering company specialising in prototypes, leads this project. What should it do? Assembling a kit consisting of a solar panel, batteries and a converter on a 2009 diesel-fuelled Polo Volkswagen. Up to 60 km/h, the car would use electricity, then turn to a hybrid, and, at higher speeds, it would run on diesel alone. Researchers from the CNR were appointed to quantify the emissions. These included Fulvio Filace, a young near-graduate in mechanical engineering chasing his dream of working for Ferrari. But on that day, he jumped on that damned car. Giulio Valesini and Cataldo Ciccolella.

GIULIO VALESINI OFF-SCREEN

It is on 23 June. It is almost two p.m. when an old Volkswagen Diesel Polo 2009 comes out of Stems, the CNR's engine research institute. A hybrid prototype drives on Naples' ring road, close to Corso Malta. A few kilometres away, the car catches fire.

TULLIO CIARLONE - WITNESS TO THE ACCIDENT

I was driving home; it was hot that day. Before me, I saw this massive column of fire starting from that car. Mine was the first vehicle approaching.

GIULIO VALESINI

Did you hear an explosion?

TULLIO CIARLONE - WITNESS TO THE ACCIDENT

I didn't hear any explosion. I just saw this massive blaze.

GIULIO VALESINI

As if there had been a combustion?

TULLIO CIARLONE - WITNESS TO THE ACCIDENT

Yes, but a non-ordinary combustion.

GIULIO VALESINI

How high were the flames?

TULLIO CIARLONE - WITNESS TO THE ACCIDENT

I guess 15 metres. If the accident had occurred a few minutes earlier, the car would have been in the middle of road traffic. And that would have caused an even greater disaster.

GIULIO VALESINI OFF-SCREEN

Driving that prototype is Maria Vittoria Prati, a researcher with expertise in analysing car pollutant emissions. Fulvio Filace, a brilliant Mechanical engineering near-graduate, sits next to her. They were to measure actual emissions and consumption while driving the experimental hybrid.

TULLIO CIARLONE - WITNESS TO THE ACCIDENT

I see this ball of fire coming out of the car. That ball was Fulvio trying to save his life by jumping out of the vehicle. I took him and brought him to the shade next to my car. And we started talking, as Fulvio had a clear mind.

GIULIO VALESINI

What did Fulvio tell you?

TULLIO CIARLONE - WITNESS TO THE ACCIDENT

Just a few seconds before the fire broke out, he and the researcher talked about the weird, acrid smell they scented in the car. I could smell that in the air, too; it had nothing to do with the typical odour of oil, fuel or diesel combustion. It was different.

GIULIO VALESINI OFF-SCREEN

The two people in the car did not survive the burns. Fulvio Filace was about to complete his MAs in Mechanical Engineering for Energy and Environment at Federico II University in Naples. He had ended up at CNR almost by chance.

GIULIO VALESINI

Is it true that his biggest dream would have been...

MARIA ROSARIA CORSARO - FULVIO FILACE'S MOTHER

To work in Ferrari. He kept telling me: "I wonder if they will take me". He liked engines. Three years ago, he graduated at the age of 22. He was ambitious and wanted to work in some nice company to put his studies and passion to good use.

GIULIO VALESINI

What did you know about the project Fulvio was working on at CNR?

MARIA ROSARIA CORSARO - FULVIO FILACE'S MOTHER

He just said: "Look, mom, two cars just arrived from Salerno, from the University of Salerno, and we need to run exhaust gas tests to see how much they pollute".

GIULIO VALESINI

Did he ever talk about the risks or dangers connected to the project?

SALVATORE FILACE - FULVIO FILACE'S FATHER

He told me just one thing: these cars are over-exploited, the ones we need to test.

GIULIO VALESINI

They are old.

SALVATORE FILACE - FULVIO FILACE'S FATHER

Exactly, exploited. They have too many kilometres.

GIULIO VALESINI

Didn't they even give you an explanation at the CNR?

MARIA ROSARIA CORSARO - FULVIO FILACE'S MOTHER

They told us that they would investigate internally. That's all.

GIULIO VALESINI OFF-SCREEN

The Mechanical Engineering Department of the University of Salerno designed the project. In 2014, the prototype's patent holder, Professor Gianfranco Rizzo, launched the spin-off company Eproinn. In 2017, Rizzo's start-up and a group of companies led by Mecaprom Technologies Corporation – a famous automotive business from Turin - received European funds. Mecaprom's CEO, upon the project's launch, is Fabrizio Regis.

FABRIZIO REGIS - CEO OF MECAPROM TECHNOLOGIES CORPORATION 2015-2021

Good morning. How are you?

GIULIO VALESINI

Was the car made here, set up here?

FABRIZIO REGIS - CEO OF MECAPROM TECHNOLOGIES CORPORATION 2015-2021

Yes.

GIULIO VALESINI

The whole story is confused. What do you think happened?

FABRIZIO REGIS - CEO OF MECAPROM TECHNOLOGIES CORPORATION 2015-2021

We have absolutely no idea. We gave the car to CNR, Rizzo and his team.

GIULIO VALESINI

Rizzo in Salerno. Is Rizzo your partner?

FABRIZIO REGIS - CEO OF MECAPROM TECHNOLOGIES CORPORATION 2015-2021

Exactly. We don't know what was done on the car, nobody informed us.

GIULIO VALESINI OFF-SCREEN

But what caused the fatal accident? Report managed to recover WhatsApp messages exchanged between CNR and Eproinn's researchers a few hours before the tragedy. Doubts and technical problems connected to flying cables and inaccurate information emerge.

CNR RESEARCHER

Good morning, professor. We took the backrest apart and found one of the yellow components detached and the other partly attached. Do we have to connect it? Was the other spare, or did it detach during handling?

FRANCESCO ANTONINO TIANO - EPROINN

They must have come off during handling.

MARIA VITTORIA PRATI

Do we have to reconnect them? The cable seems connected in the slave, while there are two pieces in the master.

FRANCESCO ANTONINO TIANO - EPROINN

No. That was supposed to be a tamper-evident seal, but none is necessary for operation.

CNR RESEARCHER

Professor, do we have to connect the car 12 v power supply there as in the picture? Because it is unplugged.

FRANCESCO ANTONINO TIANO - EPROINN

Yes, it needs to be connected there.

MARIA VITTORIA PRATI

Thank you, Francesco. Just to be sure, the label says ch5 on one side and ch9 on the other.

FRANCESCO ANTONINO TIANO - EPROINN

They are default labels. I have never replaced them.

GIULIO VALESINI OFF-SCREEN

The problems are there up to a few days before the experiment.

MARIA VITTORIA PRATI

How can we drive it only in electric mode?

FRANCESCO ANTONINO TIANO - EPROINN

You just turn on the ignition and accelerate.

MARIA VITTORIA PRATI

But it doesn't accelerate, I tried.

FRANCESCO ANTONINO TIANO - EPROINN

Do you, at least, feel an attempt to push?

CNR RESEARCHER

Sorry again, Francesco. Do these wires have to be plugged in? I found them unplugged. They bear no label.

FRANCESCO ANTONINO TIANO - EPROINN

No, they must be unplugged.

CNR RESEARCHER

Fine. We attempted the electric mode, and it worked now.

GIULIO VALESINI

All that remains to the scientists is relying on the Holy Virgin's protection. Maria Vittoria Prati has another unanswered doubt.

MARIA VITTORIA PRATI

One question. As it is warm, we will use the air conditioning in the car. Problems in hybrid mode?

FRANCESCO ANTONINO TIANO - EPROINN

To detect the proper consumption, I think that air conditioning should not be used, as the AC motor is on the distribution, and it would increase consumption in the engine.

MARIA VITTORIA PRATI

Maybe we can test it with all the windows open. Which external temperature is needed for the battery to go into protection? The devices installed on board warm up the car interior quite a bit.

FRANCESCO ANTONINO TIANO - EPROINN

I don't know the battery's protection temperature. We haven't received information or support from the manufacturer. But I think it should work without problems.

GIULIO VALESINI OFF-SCREEN

The patent for the solar energy-fuelled hybrid prototype patent belongs to Professor Gianfranco Rizzo.

GIULIO VALESINI

You probably have an idea of what happened.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I do, but this is a very sensitive phase.

GIULIO VALESINI

Well, tell me.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I cannot tell you. I immediately talked with, let's say, the police, then the magistrates and carabinieri. I said it all to them. This is a sensitive phase, and confidentiality must be maintained.

GIULIO VALESINI

You think it was the gas cylinders, but an eyewitness told me no explosion occurred. No, professor, one thing... I read the chat, and you should answer me on that; I read your team's chat.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I am listening to you. I neither confirm nor deny. I am a polite person and a supporter of Report.

GIULIO VALESINI

Yes, but there is an interest, too, because two people died... Listen to me. I read the messages in your working group. Ok. They contained remote advice on wires they didn't know where to place. It all looked pretty extemporaneous, professor. Let me be honest with you. Do you understand which chat I am referring to?

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I neither confirm nor deny.

GIULIO VALESINI

There is not so much to deny here. I read the chat.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I have already discussed that with the magistrates.

GIULIO VALESINI

But the information in those chats is wildly inaccurate.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I have already discussed that with the magistrates.

GIULIO VALESINI

Yet, one thing struck me. And you can give me an explanation of this. At one point, Professor Prati asked you what the battery protection temperature was, and you told her that you had no data. The manufacturer failed to give you data and assistance. Because in the car it was very hot, too hot.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I am not aware of that.

GIULIO VALESINI

How is that possible?

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I don't have this information.

GIULIO VALESINI OFF-SCREEN

At the CNR engine institute, the prototype was designed with devices to detect exhaust gas quantities under actual driving conditions. They included two cylinders on board, needed for the test. In one, there was a small concentration of propane gas.

GIULIO VALESINI

I know the composition of one of the two cylinders. A minimum, very minimum, percentage of propane was in there.

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

Yes.

GIULIO VALESINI

You say: couldn't it have been the cylinders?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

Almost certainly, it was not the cylinders.

GIULIO VALESINI

Almost or certainly?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

Given the gas concentration, as far as we know, it could not have been the cylinders.

GIULIO VALESINI

The eyewitness I interviewed had the chance to talk with Fulvio after the accident, and said there was a strong, acrid smell just before the combustion. What could it be?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

That acrid smell comes with the deterioration of the batteries. I would define it as alcoholic more than acrid.

GIULIO VALESINI

So, is it the battery?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

It could be the battery.

GIULIO VALESINI

Professor Prati asked: what is the battery protection temperature? But the question remained unanswered because those who...

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

Honestly, I don't know if this is the case, because I tell you, I tell you now...

GIULIO VALESINI

She was told that the manufacturer had not sent any data.

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

This is not the case. I will check these chats.

GIULIO VALESINI

I know that the professor asked this question, and a researcher from Salerno replied that the manufacturer had not provided this information.

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

There can be no contradiction in this.

GIULIO VALESINI

Do you know what surprised me the most?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

Tell me.

GIULIO VALESINI

... that when the car arrives here and is fitted with the devices needed for the measurements, many doubts emerge on the wiring; some were unplugged, and technical consultations are done remotely. In other words, they sent photos of the wires and asked: "Should this wire be plugged in or not? Where do we place this? Does it go on the right or left?"

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

I am unaware of this.

GIULIO VALESINI

But do you usually work like this?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

No. I don't know these things, so I cannot answer you.

GIULIO VALESINI OFF-SCREEN

However, CNR announced the launch of an internal audit to understand what happened to the prototype.

GIULIO VALESINI

Did the CNR-STEMS sign a contract with Sunmotive?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

Yes.

GIULIO VALESINI

Who paid you for fitting the car?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

At that time, we communicated with Sunmotive through Professor Gianfranco Rizzo. On our side, Professor Maria Vittoria Prati had closed agreements with Sunmotive.

GIULIO VALESINI

So, is there a contract?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

It should indeed exist.

GIULIO VALESINI

Don't you know that? You don't know it?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

Right now, I don't know.

GIULIO VALESINI

So, can you tell me how much CNR was paid for this trial?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

I think there must have been a cost estimate for these tests.

GIULIO VALESINI

I am asking this to you. You are the Director.

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

You want to know how much CNR was...

GIULIO VALESINI

Eh!

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

I will inquire and let you know if you wish.

GIULIO VALESINI

Why was the CNR paying for the car insurance? There was a civil liability insurance on that car.

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

They always do that. I was told so.

GIULIO VALESINI

Why is fire risk excluded?

BIANCA MARIA VAGLIECO - DIRECTOR OF STEMS-CNR

I don't know, I am sorry.

GIULIO VALESINI OFF-SCREEN

The ultimate goal was the commercialisation of the HySolarKit, the system that would allow old cars to drive in the limited traffic zones. In June, Rizzo also signed an agreement with the Uzbekistan Sustainable Development Agency, thanks to a meeting organised by our Foreign Ministry.

To check how much money and in which tranches it ends up on the project, we contacted the European Commission, which finances the Life programme, which referred us to the Ministry of the Environment, which acts as a point of reference for Italian companies. But an official at the Ministry told us, wrongly, that the data is not public. Not even the beneficiaries of the lead company, Mecaprom, the automotive company in Piemonte, want to talk about the use of the funding.

GIULIO VALESINI

But how was the project money spent?

FABRIZIO REGIS - CEO OF MECAPROM TECHNOLOGIES CORPORATION 2015-2021

Again, why should I talk about this?

GIULIO VALESINI

Excuse me, aren't you Mecaprom?

FABRIZIO REGIS - CEO OF MECAPROM TECHNOLOGIES CORPORATION 2015-2021

Why should I talk about that? These are internal corporate issues; talking about them doesn't feel ethical or correct.

GIULIO VALESINI

It is public money, though...

FABRIZIO REGIS - CEO OF MECAPROM TECHNOLOGIES CORPORATION 2015-2021

I know, indeed.

GIULIO VALESINI

So, it would be ethical and correct to talk about it.

FABRIZIO REGIS - CEO OF MECAPROM TECHNOLOGIES CORPORATION 2015-2021

No.

GIULIO VALESINI OFF-SCREEN

The Regis family must be very fond of confidentiality because, from the very beginning, the group's company has always been registered in the name of a Swiss trust company, and the very first director was Angelo Iaselli, a veteran of trust companies in the past, a P2 lodge membership card.

GIULIO VALESINI

Who spent the money, and where did it go? There wasn't that much money in that project, professor, in that car.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

This is what you think, anyway...

Why was the project only reported on 22 September, one day after Report's inquiry at the European office that allocated the funds? Is this a coincidence?

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

With what happened? A delay is typical in these cases.

GIULIO VALESINI

Yes, but strangely enough, on December 21, we requested clarifications from the EU, and on 22, the project was reported.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

I don't know. It is a coincidence.

GIULIO VALESINI

A coincidence. Don't run over me. One second. Who spent the money?

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

Who spent it? Do research on the websites of the European Community; they specify the project details and leader...

GIULIO VALESINI

The project leader was Mecaprom. So, Mecaprom spent it? But who fitted the car?

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

Is this the first time you see an EU project? Look at the financing and co-financing, as every euro allocated by the European Community equals one euro spent by the project partners. The rules are stringent. There are guidelines and precise costs.

GIULIO VALESINI OFF-SCREEN

We discovered that Mecaprom and its partners have already spent 1.3 million euros from EU funds. A final instalment of 500 thousand euros will be allocated after the issue of a summary report. The Italian partners had to submit all the documents by the end of May, but they requested a one-month extension right before the deadline. But the final report would only be issued on 22 September, far beyond the deadline, when it was clear that Report was investigating. And the report is incomplete. Europe kept prompting for an answer, and on October 16, Mecaprom submitted a new report. But this time, too, it was judged deficient.

GIULIO VALESINI

Can you show us the financial accounting report?

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

Some reports are public.

They are not public.

GIANFRANCO RIZZO - CEO OF EPROINN - SUNMOTIVE

Not yet, but they will be published. There is a procedure to comply with.

SIGFRIDO RANUCCI IN STUDIO

Then, there are mouths from Europe about how the money was spent. Half-sewn instead are those at the Ministry of the Environment, where an official gave us some information that is not relevant. On the other hand, the doubt is that they were not at all sewn up with the implementers of that project, given that after our interest in the facts, the accounts surfaced, apparently also incomplete. It is one of the dark sides of this affair that also had a noble purpose because it allowed, would have allowed to those who did not have the financial means, to enter limited traffic zones for free. Only this project deserved something more than the jumble of wires we saw. This is an exemplary story: one has a nice idea, a nice project that also has social aims, and it is viewed with indulgence and interest by the European Commission, but then there is much sloppiness in implementing it. Two CNR researchers paid the price with their lives, and the finger is pointed at the battery, according to the testimonies collected by our Giulio Valesini. It is disturbing, precisely now, when there is a race to go electric, to find raw materials and build batteries. This is also because the Commissioner, former Commissioner Timmermans, the Dutchman, had established that Europe must become the first continent with electric mobility. So, we requested to interview him to ask what price should be paid for this. We asked him and his successor, Maros Sefcovic, but they refused the interview. Which what is it that we would have asked them and they did not want to hear?

GIULIO VALESINI OFF-SCREEN

It was 14 July 2021 when the President of the Commission announced the launch of the European Green Deal during a press conference.

PRESS CONFERENCE "DELIVERING THE EUROPEAN GREEN DEAL" - 14.07.2021

URSULA VON DER LEYEN - PRESIDENT OF THE EUROPEAN COMMISSION

We aim to make Europe the world's first climate-neutral continent. And this is why we set out to make the climate goal, not only a political aspiration, but also a legal obligation.

GIULIO VALESINI OFF-SCREEN

The European Green Deal envisages the obligation to manufacture zero-emission trucks and cars by 2035, a whole shift to electric vehicles. An ambitious target, later examined by the European Court of Auditors.

ANNEMIE TURTELBOOM - EUROPEAN COURT OF AUDITORS

The European Commission is very ambitious, but we must monitor their calculations: they are working on old, even incomplete data, from 2016, but we are in 2023.

I mean, you say we had a blind strategy? Did we move a little bit in the dark?

ANNEMIE TURTELBOOM - EUROPEAN COURT OF AUDITORS

We have limited access to mineral raw materials. In other words, we have to import them from non-EU countries. Producing batteries requires much energy, which is expensive. Therefore, we reached two conclusions: either we do not reach the 2035 target, or we reach it by importing cars, mainly from the US and China.

GIULIO VALESINI OFF-SCREEN

The risk is real: Stellantis signed an agreement with the Chinese company Leapmotor that covers the sale of their electric cars to Europe a few days ago. In short, if you can't beat them, fight on their side.

ANDREA TASCHINI - BUSINESS MANAGER AND CONSULTANT

If China holds raw materials, it also produces batteries. It is very likely that the vehicles, including those with European brands, will be made in China.

GIULIO VALESINI

Will they build their factories there?

ANDREA TASCHINI - BUSINESS MANAGER AND CONSULTANT

As a manager, I would place the car production as close as possible to the maximum value it can provide; in other words, given that batteries, electric engines, and software are produced in China, I would make the cars there.

GIULIO VALESINI OFF-SCREEN

The whole European automotive industry is at stake. As well as social stability.

ANNEMIE TURTELBOOM - EUROPEAN COURT OF AUDITORS

Let's not forget that 3.5 million people work in the automotive industry in Europe. 200 thousand in Italy only. You can push for climate neutrality, but you must see if you can reach it only by importing from China.

GIULIO VALESINI OFF-SCREEN

In 2023, the sale of electric cars in Europe doubled compared to 2022. One in five newly registered vehicles is electric. Italy lags behind.

ELECTRIC CAR OWNER

I hate it. Every day, it has to be charged, handled... It is tiring.

GIULIO VALESINI

Why did you choose an electric car?

ELECTRIC CAR OWNER

I had to. I needed a city car.

GIULIO VALESINI

Many people buy electric cars to have cleaner air. Do you believe that?

ELECTRIC CAR OWNER

I think we're a long way off if we start with cars.

GIULIO VALESINI

You should plug it in within ninety seconds.

ELECTRIC CAR OWNER 2

Fine.

GIULIO VALESINI

How long does it take to recharge?

ELECTRIC CAR OWNER 2

It depends on the charging station's power. The fast 350 w, free to X charging stations takes 30 minutes.

GIULIO VALESINI

Why did you go electric?

ELECTRIC CAR OWNER 2

I spare money. The car is cool. Once you get used to it, it is like a mobile phone. I work in a company that designs green solutions. Having an electric car is essential for our corporate image.

GIULIO VALESINI

To show that you are green?

ELECTRIC CAR OWNER 2

It is not showing; we indeed are.

GIULIO VALESINI

Where do you think they take the energy from?

ELECTRIC CAR OWNER 2

I don't know.

GIULIO VALESINI

Aren't these solar panels enough?

ELECTRIC CAR OWNER 2

No, I don't think so.

GIULIO VALESINI OFF-SCREEN

The price of an electric car depends mainly on the battery replacing the conventional engine. The most commonly used ones have nickel, cobalt, lithium and manganese in quantities varying according to manufacturers. They must guarantee durability, charging speed, power. For example, a battery pack contains 39 to 43 kilos of nickel.

SILVIA BODOARDO - PROFESSOR OF APPLIED TECHNOLOGY AT THE UNIVERSITY OF TURIN

This is a cylindrical industrial cell, similar to those used in battery packs for automotive, but we can find it in different formats, too. If I need a power-based system, I would look for a cell that allows better heat distribution.

GIULIO VALESINI

Are these the famous cells contained in the battery packs of electric cars?

SILVIA BODOARDO - PROFESSOR OF APPLIED TECHNOLOGY AT THE UNIVERSITY OF TURIN

Sure, we have many cells, many little cylinders linked to each other.

How much does a battery weigh?

SILVIA BODOARDO - PROFESSOR OF APPLIED TECHNOLOGY AT THE UNIVERSITY OF TURIN

The battery weighs around 500 kilos.

GIULIO VALESINI

What is inside this battery?

SILVIA BODOARDO - PROFESSOR OF APPLIED TECHNOLOGY AT THE UNIVERSITY OF TURIN

The cathode includes metals, the most concerning being nickel, cobalt, and manganese.

GIULIO VALESINI

Usually lithium, we have it, don't we?

SILVIA BODOARDO - PROFESSOR OF APPLIED TECHNOLOGY AT THE UNIVERSITY OF TURIN

Lithium, for sure. It is not certain that this will be the future forever. Everything inside the battery can be recycled, but that is still a bit complex; also, because the cells on the vehicle today are still good, they are not yet to be replaced.

SIGFRIDO RANUCCI IN STUDIO

In brief, if you want to become the first e-mobility continent in the world, you must have the batteries available, which means having the raw materials, namely nickel, lithium, cobalt and copper. The circle is usually this: car manufacturers buy the batteries from China and Korea, which do not produce them in their entirety; they assemble them, do intermediate processing, and buy the refined raw materials from those countries where labour costs less than in theirs and where there is no environmental protection. Report has set out on the trail of nickel, which accounts for 10 per cent of the highest-performing batteries. Ariadne's thread took us as far as Indonesia, where in 2020, the government made a decision: no more nickel exports, let's do everything here, let's develop the industry, let's add value, including employment. But then suddenly something went wrong.

GIULIO VALESINI OFF-SCREEN

Whoever wants nickel to build batteries needs to go to Indonesia, the largest country in Southeast Asia: 280 million inhabitants, some of whom live in the glittering skyscrapers of Jakarta and many others in shacks and favelas. Pulling the GDP, which has overtaken Italy's, is the raw material sector, in which Indonesia is rich: today, it is the world's leading nickel producer. To understand how this material is extracted and processed, we must fly to the east of the country in Weda Bay or Morowali.

This is IMIP, a vast industrial district worth 15 billion dollars, born in partnership with Tsingshan, a Chinese company. They do everything here, from mining to refining to semi-products. Namely, the entire automotive industry takes part of the nickel used in batteries here, from Tesla to Stellantis, from Mercedes to Volkswagen, up to Chinese brands like Byd, the world's leading manufacturer of electric cars. Thanks to the massive deforestation of the area, the IMIP extends for more than 3 thousand ha.

ARIE ROMPAS - GREENPEACE INDONESIA

In September 2023, Indonesia's nickel mining and manufacturing area reached almost one million ha of surface, with 362 permits. Unexplored nickel reserves will

require the deforestation of a further 600 thousand ha of virgin forest, we discovered. An impressive figure. This means that nickel manufacturing will generate high emissions and destroy the biodiversity in the region.

GIULIO VALESINI OFF-SCREEN

After the war in Ukraine, Indonesia's nickel gained more popularity because it was cheaper. Leading the Association of Nickel Mining Industries is Secretary General Meidy Katrin, who does not hide her enthusiasm for this booming business.

MEIDY KATRIN LENGKEY - SECRETARY GENERAL OF THE INDONESIAN MINING INDUSTRIES

This year, we mined 178 million tonnes of raw material. We have another company building a new plant, and a second one designing it. The national target is 467 million tonnes. Can you believe it? But don't ask me about environmental pollution.

GIULIO VALESINI OFF-SCREEN

Deforestation here is needed to have clean vehicles in our limited traffic zone. In this way, Indonesia is turning into the new Amazon. Hundreds of barges are waiting around the ports of industrial districts; the energy required to mine the materials for batteries is based on coal. In 2013, Indonesia generated 164 million tonnes of CO2 from coal only. With the mining boom, CO2 emissions doubled to 303 million tonnes. Every tonne of nickel produced in Indonesia generates an average of 58 tonnes of equivalent CO2, far beyond the world average.

GIULIO VALESINI

It's all nonsense, i.e., we are working to build cars and batteries for green vehicles, and we are polluting with CO2, using vast amounts of coal.

MEIDY KATRIN LENGKEY - SEGRETARIA GENERALE ASSOCIAZIONE INDUSTRIA MINERARIA INDONESIANA

True. It sounds like nonsense. Green cars are produced with coal energy. You want us to go solar, but imagine we have 177 production lines requiring much power. And we have much coal, so we use that. It's not like we can import energy.

GIULIO VALESINI OFF-SCREEN

The result is this: all day long, impressive columns of smoke rise from the plants, everywhere the air is unbreathable, and the inhabitants protect themselves as best they can with masks. Respiratory problems are now an emergency in the public hospital.

SAYA ADRIANI - MOROWALI HOSPITAL EMERGENCY ROOM

Every day, patients come in with acute respiratory problems. They are not only elderly but also young people, even many children.

GIULIO VALESINI

Do you think there is a link between such respiratory problems and mining activity?

SAYA ADRIANI - MOROWALI HOSPITAL EMERGENCY ROOM

A study would be necessary to assess the impact of industrial pollution on people's health. But nobody has conducted it so far.

GIULIO VALESINI OFF-SCREEN

Pollution rises in the air and water, too. Ten plants have been set up to refine nickel, which uses the HPAL (High-pressure acid leaching) process. Such a process involves treating crushed raw rocks with sulphuric acid at 255 C° and very high

pressure. About 1.5 tonnes of hazardous waste is produced for every tonne of processed nickel.

SEPTIAN HARIO SETO - DEPUTY MINISTER OF INVESTMENTS AND MINES

We want to ensure that the world has enough nickel supplies for steel and electric vehicles. We decided to process the nickel here and then sell it on the market: we will have more jobs, more economic development, more wealth for everyone.

GIULIO VALESINI

We went to Morowali to check the environmental conditions: a hefty environmental impact. You look more interested in the business than in the citizens' health.

SEPTIAN HARIO SETO - DEPUTY MINISTER OF INVESTMENTS AND MINES

True. We have a pollution problem, but it is not true that we are doing nothing. We have given companies until the end of this year to improve the situation. Those who are not compliant will close down.

GIULIO VALESINI

Among other things, you also need to dispose of four million tonnes of toxic waste resulting from mining: what do you do with this toxic waste?

SEPTIAN HARIO SETO - DEPUTY MINISTER OF INVESTMENTS AND MINES

Hazardous waste is dried and stored. If a business fails to manage toxic waste properly, we will not issue it a permit for the plant.

GIULIO VALESINI OFF-SCREEN

In a region characterised by high seismic and flood risk such as Indonesia, toxic sludge stored on land might end up everywhere, especially in the water.

ARIE ROMPAS - GREENPEACE INDONESIA

We have never tested the use of this method. The risk has an enormous impact on the environment. The first signs of pollution from refineries were found along the coasts and in the rivers.

GIULIO VALESINI OFF-SCREEN

The open-air storage where the industrial giant IMIP keeps its toxic waste covers 600 ha. It is not surprising that winds and rains can spread chemicals in the waterways and groundwater. Ten years ago, this area hosted a fishing village with a few hundred inhabitants who lived off fishing. Now the sea has dried and plants and animals have died. We saw that seawater has turned red in some areas, where it was crystal blue a few years ago. The waters of the rivers running far from the ocean are deep red.

VILLAGE HEAD

Can you see it? Pollution everywhere. It comes from IMIP's factory waste disposal. The plant is there: about 500 metres from here. The waste, dragged by streams, reaches the sea. Once we had a fishing cage here. All the fish in the cage died because the water was too hot and collected all the industrial waste from this gutter. Can you get it? All dead.

GIULIO VALESINI

Big automotive companies use nickel to drive the ecological transition. To build a better world.

VILLAGE HEAD

No problem, sir. As long as we can benefit from the wealth of the nickel industry without leaving our island. This is our home.

GIULIO VALESINI OFF-SCREEN

This is how the seabed looked like a few years ago, before the boom of nickel. The coral reef was thriving and the fish crowded the sea. A local environmentalist, Habib Nadjar Buduha, managed to film how the seabed is now, covered by layers of polluted sand and inhabited by dead reefs. We asked for clarifications from the owners of the IMIP and IWIP industries. But they refused our interview. We could not reach them in their luxury hotel for businessmen and managers. It is private, one needs an invitation to enter.

So we flew to the London Metal Exchange Week and found them in a luxury hotel

that looks like a castle, once used as a set for Harry Potter. This time, they could not disappear, and we stopped a manager of the Chinese group, Tsingshan, the majority stakeholder, who seemed unhappy to see us.

ANDERSON GUAN - TSINGSHAN MANAGER

Make sure you don't mention my name.

CATALDO CICCOLELLA

We collected these pictures as we are concerned that the waste generated by the refining process ends up in the water.

ANDERSON GUAN - TSINGSHAN MANAGER

Where did you film this?

GIULIO VALESINI

Morowali. IMIP.

ANDERSON GUAN - TSINGSHAN MANAGER

Did you film it?

CATALDO CICCOLELLA

Two weeks ago.

ANDERSON GUAN - TSINGSHAN MANAGER

Two weeks ago?

GIULIO VALESINI

What is that?

ANDERSON GUAN - TSINGSHAN MANAGER

Do you say it is pollution? Maybe ...

CATALDO CICCOLELLA

The water was hot, strangely hot.

ANDERSON GUAN - TSINGSHAN MANAGER

I don't think this is due to toxic waste, maybe it is the scraps of the power plants or something that fell into the sea during loading or unloading operations in the port area. Let me show you some pictures taken from the IMIP private hotel. The ocean is blue.

CATALDO CICCOLELLA

Another issue is the storage of HPAL toxic waste. They are contained in a sort of dam. Is there any risk of floods or earthquakes?

ANDERSON GUAN - TSINGSHAN MANAGER

Earthquakes are a daily occurrence in Indonesia. But we opened the Morowali industrial park ten years ago and the Weda Bay five years ago. The areas are safe. Nothing happened so far.

GIULIO VALESINI OFF-SCREEN

The business manager refuses to admit it, but the ocean water is weirdly hot and almost boils as you get close to the processing plant. We approached it by boat, accompanied by a local fisherman.

ARWAL - FISHERMAN

The water is too hot due to the waste from the plants. There is a gutter that brings the plant scraps to the sea. Do you see it? It is right there. You can try to put your hand in the water but watch out; it is scalding.

GIULIO VALESINI

Yes, it is boiling.

ARWAL - FISHERMAN

The coal smell is there at night, too, so we feel like we cannot breathe.

SEPTIAN HARIO SETO - DEPUTY MINISTER OF INVESTMENTS AND MINES

Look at it this way. Eight years ago, Morowali was just a poor area. If we fail to develop this industry, people will remain poor. Did you see how many motorbikes there are in Morowali?

GIULIO VALESINI OFF-SCREEN

The workers live in dirty, crowded and oppressive shacks with sanitary facilities in which waste flows directly into open sewers. The refining plants attracted thousands of workers from all over Indonesia and China. During the shift change in the evening, they crowd the road towards the IMIP industrial park.

IMIP WORKER 1

It is all contaminated. I have respiratory problems. Cough. Sometimes, I feel my chest and throat burning. The air in the factory is dense with powder; we breathe a little clean air.

IMIP WORKER 2

There have been severe accidents in the factory. We keep asking for safety, but they don't listen.

GIULIO VALESINI OFF-SCREEN

Working conditions are terrible. Despite the company's millionaire profits, the shifts last even 12 hours without any protection and safety measures. A few months ago, Indonesia united in grief after the death of Nirwana Selle, an expert young crane operator known on social networks, employed in a nickel refinery not far from IMIP. She was burnt to death for an electric short circuit that caused an explosion. The plant lacked proper maintenance.

IMIP WORKER 3

As workers, we are spied on. IMIP pays some people to control us. They take pictures and videos inside the factory. Some of them are also outside. IMIP could

fire us if they knew that we were talking to journalists.

IMIP WORKER 4

We cannot talk about the accidents with the outside world. Some colleagues published pictures of the accidents that occurred inside the plant. They were identified and punished. This is what they do instead of improving safety.

GIULIO VALESINI OFF-SCREEN

The Indonesian government seduces big automotive companies and just issued a law that reduces workers' rights to attract foreign investments.

GIULIO VALESINI

Is it true that Elon Musk wants to invest in Indonesia?

SEPTIAN HARIO SETO - DEPUTY MINISTER OF INVESTMENTS AND MINES

Yes, it is true. He wants to invest in Indonesia. We have discussed it for more than one year and a half. Tesla already purchased the nickel from us through a supplier. If he decides to open his plant, we will welcome it indeed.

GIULIO VALESINI OFF-SCREEN

Among Stellantis' suppliers, there are two Chinese companies. It goes without saying that the processing happens here. And the competitors along the supply chain are even more cloudy.

GIULIO VALESINI

What about German companies?

PIUS GINTING - RESEARCHER AND ACTIVIST

BMW and Volkswagen ratified batteries supply agreements with the Korean company Samsung SDI and the battery Chinese giant CATL, who take their components from GEM, a company that, in turn, runs a local business in the IMIP industrial area in Morowali. Mercedes is among those who buy nickel from CATL, whose supplies come from GEM.

GIULIO VALESINI OFF-SCREEN

This is Pius Ginting, the author of two detailed reports on the nickel supply chain for electric cars, published by the Rosa Luxembourg Foundation, the German leftist think tank. The titles tell it all: "The road towards ruin" and "The dark side of batteries".

GIULIO VALESINI

And Tesla?

PIUS GINTING - RESEARCHER AND ACTIVIST

Also Tesla purchases batteries from CATL and the Korean company LG Energy Solution, which uses a subsidiary to process nickel in the industrial area of Morowali. In short, there is no way out. Everybody comes to Indonesia for their nickel supply.

GIULIO VALESINI OFF-SCREEN

But the marketing has decided: if you drive a big electric SUV with hundreds of kilos of mined minerals, you are fighting the war to go green, almost like an activist of Fridays for Future.

MEIDY KATRIN LENGKEY - SECRETARY-GENERAL OF THE INDONESIAN MINING INDUSTRY ASSOCIATION

China controls 99% of the supply chain. The boom of nickel for batteries in Indonesia happened thanks to them. Their only concern is to make money, and they don't interfere with our politics.

GIULIO VALESINI

Tesla, Volkswagen, Stellantis purchased nickel from Indonesia to build their batteries. Do they know how it is produced? Or can they say: "We were unaware that Indonesian plants pollute"?

MEIDY KATRIN LENGKEY - SECRETARY-GENERAL OF THE INDONESIAN MINING INDUSTRY ASSOCIATION

Come on. We don't hide anything from anyone. There is the utmost transparency here. All Western investors are aware of how we mine and process nickel here. The managers made their checks personally. They know very well where all this comes from.

GIULIO VALESINI

Do you find the way Western businesses use green marketing as an added value a little hypocritical?

MEIDY KATRIN LENGKEY - SECRETARY-GENERAL OF THE INDONESIAN MINING INDUSTRY ASSOCIATION

While you do green marketing, someone has to hide something.

GIULIO VALESINI

What they sell us as 'green', is not green at all.

MEIDY KATRIN LENGKEY - SECRETARY-GENERAL OF THE INDONESIAN MINING INDUSTRY ASSOCIATION

Yes. What counts is to say that the battery production cycle is green; you don't have to reveal the details of each processing phase to the market, or someone might say that a brand is dirty. That is why marketing teams exist. Come on. This is business.

GIULIO VALESINI OFF-SCREEN

This summer, the European Parliament approved a regulation on batteries. It aims to better monitor the supply chain, but the manufacturers will have the chance to pick their inspectors and pay them to certify that their batteries are green and exploitation-free. The rapporteur is Achille Variati.

GIULIO VALESINI

The manufacturer will do everything to say that their batteries are sustainable.

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

There is, and there should be an independent authority...

GIULIO VALESINI

Independent, paid by the manufacturer?

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

No.

GIULIO VALESINI

So, I am not the one who pays the certifying entity? The one that chooses it?

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

No, this would be a severe issue.

GIULIO VALESINI

The regulation talks about notified entities, namely, paid by the businesses to certify the process quality.

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

I wish that if you produce raw materials in a deplorable way, you won't be allowed to sell batteries on the European market.

GIULIO VALESINI

You are correct in using the verb in the conditional tense.

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

Well, I used this tense as we all know there are vital interests behind this.

GIULIO VALESINI OFF-SCREEN

There is another revealing detail. The manufacturers are obliged to declare the CO2 generated by the batteries through their life cycle, but no maximum threshold has been set yet. In other words, they can produce dirty batteries - like those with Indonesian nickel - declare them and sell them anyway. To reach the 2035 target, the EU will turn a blind eye.

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

Batteries are a must in the Green Deal.

GIULIO VALESINI

But how are they produced? They are not green.

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

We will never reach the targets set in the Green Deal.

GIULIO VALESINI

The problem is that in Europe, we might reach them at the expense of other world regions.

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

Well, in those cases, proper due diligence is fundamental.

GIULIO VALESINI

There is a world outside Europe.

ACHILLE VARIATI - MEP - DEMOCRATIC PARTY

I get it.

SIGFRIDO RANUCCI IN STUDIO

The European regulation on batteries envisages controls on the supply chain. It is a great initiative, but who controls such control? The same manufacturers seeking to obtain the certifications from notified entities pay them. Experience teaches us that this method is not so effective. In fact, which entities would disappoint those they get paid from? Will Chinese businesses allow full and unlimited inspections of their premises or the countries they take their raw materials from? The motto "what the eyes do not see, the heart regrets not" has worked so far. To lower CO2 emissions in our country, we should raise them elsewhere. It is subtle colonialism; no matter if human rights are violated, deforestation is carried out, and corruption rises. No matter if some worker occasionally burns alive. But what do automotive businesses know about this? We asked them and received answers from BMW, Mercedes, Stellantis and Volkswagen. Their reply is inaccurate, but they declare not to purchase raw materials directly and impose their suppliers to comply with good practices. Tesla does not reply at all. They sent us a link proving that they have done inspections in Indonesia and are taking action in this regard. However, they don't mention either comment on the environmental condition or the workers. Anyway, all the answers are available on our website. What is certain is that if Europe aspires to become the first e-mobility continent worldwide, it should find a way to get batteries and raw materials. What is the solution? The solution might be mining raw materials in their lands or importing them from foreign countries. But, to do so, you need to face China, which holds 90% of the supply chain. An alternative might be purchasing from the US, which, in turn, relies on China, too. Or maybe we can mine them in our continent, according to the project of Von Der Leyen and also of Italian Minister Urso that aims to find at least 10% of raw materials and recycle 15% of them. But where can we start digging?

GIULIO VALESINI OFF-SCREEN

A few weeks ago, the Ministry of Made in Italy, Adolfo Urso, announced an ambitious national mining plan to relaunch dozens of sites in Central and North-Western Italy to mine sixteen critical ores. Then, someone should think about processing them.

29.03.2023

ADOLFO URSO - MINISTRY OF BUSINESSES AND MADE IN ITALY

Over the next months, we will map ore deposits in Italy. The largest lithium deposit in Italy is located inside a natural park in Liguria.

GIULIO VALESINI OFF-SCREEN

It is not lithium, but titanium. The largest European deposit mentioned by Minister Urso is in this beautiful Ligurian landscape, deep inside the UNESCO-protected area of Beigua, between Genoa and Savona. They want to open a mine around it because titanium is a valuable resource for the green transition and the defence and communication industries.

You are sitting on a goldmine.

DANIELE BUSCHIAZZO – PRESIDENT OF THE REGIONAL NATURAL PARK OF BEIGUA

I don't think a mining district can work with a park. It will also be necessary to dispose of the mined materials, and they are not used as titanium dioxide, so...

GIULIO VALESINI

If I mine one hundred, how much is the residual part?

DANIELE BUSCHIAZZO - PRESIDENT OF THE REGIONAL NATURAL PARK OF BEIGUA

The residual should be ninety, while titanium dioxide should be ten. The ore is contained in eclogites, which, in turn, contain asbestos. Now, it is inactive. But if they start digging, it will activate.

GIULIO VALESINI OFF-SCREEN

The European project for critical ores envisages a strategic interest in some mines. This means the permits will be issued through special laws in a maximum of two years. Local populations won't be able to object. The Giacobbe family left the city to open a sustainable farm within the park, and they want nothing to do with titanium.

MANUELA GIACOBBE - FARMER

We came up with the idea of breeding goats, and this looked like a beautiful place. And it is.

GIULIO VALESINI

The reason the state imposes this is, no, titanium. A strategic ore that the Country needs to achieve ecological transition.

MANUELA GIACOBBE - FARMER

But here, it would also destroy a lot of things.

GIULIO VALESINI

Aren't you interested in the economic compensation from the government? I mean, maybe...

MANUELA GIACOBBE - FARMER

What compensation?

GIULIO VALESINI

The mining company might tell you: "We can pay for the shed upgrade or give you money...

MANUELA GIACOBBE - FARMER

What would I do with a shed upgrade if I cannot sell my dairy products?

GIULIO VALESINI OFF-SCREEN

A study by the University of Genoa pointed out the main environmental risks connected to mining titanium from Beigua rocks. There is only one mine similar to that in the world; it is in China. In 2021, Toti's municipal council authorised Compagnia Europea Titanio (European Company Titanium) – a small company from Cuneo with a share capital of 10,000 euros - to conduct research around the park.

ADA BENEDETTO - DIRECTOR OF COMPAGNIA EUROPEA TITANIO

It is believed that the area contains about 400 billion resources.

GIULIO VALESINI

400 billion euros?

ADA BENEDETTO - DIRECTOR OF COMPAGNIA EUROPEA TITANIO

Yes.

GIULIO VALESINI

In monetary value?

ADA BENEDETTO - DIRECTOR OF COMPAGNIA EUROPEA TITANIO

Yes.

GIULIO VALESINI

Wow...

ADA BENEDETTO - DIRECTOR OF COMPAGNIA EUROPEA TITANIO

I don't know what Liguria's GDP is, but I guess it's not even close.

GIULIO VALESINI

I think you don't have the answer, but how could we mine cleanly?

ADA BENEDETTO - DIRECTOR OF COMPAGNIA EUROPEA TITANIO

You understand that... How am I supposed to be so skilled to give you solutions or answers on clean mining?

GIULIO VALESINI

I get it, but you are requesting the permit. Sorry, who am I supposed to ask?

ADA BENEDETTO - DIRECTOR OF COMPAGNIA EUROPEA TITANIO

To those who will decide to use such resources in the future. Not to me.

GIULIO VALESINI OFF-SCREEN

They want to sell the mining license to a corporation with the financial and practical means to mine in this area. But long before starting, the project was brought to court, pending the ruling by the Council of State.

GIULIO VALESINI

The government said: "Fine, let's mine". You have the wind in your sails.

ADA BENEDETTO – DIRECTOR OF COMPAGNIA EUROPEA TITANIO

This might be the right moment.

GIULIO VALESINI OFF-SCREEN

But the government's plan envisages dozens of sites to be mined for ores: along with titanium in Liguria, they are looking for zinc, lead, and silver in Lombardy, via lithium in northern Lazio, the recovery of Sardinian mines and cobalt and nickel in the Alps, near Turin.

GIANCLAUDIO TORLIZZI - FOUNDER OF T-COMMODITY CONSULTING FIRM

If we want to go electric, there are no other options.

Do we need special laws?

GIANCLAUDIO TORLIZZI - FOUNDER OF T-COMMODITY CONSULTING FIRM

Absolutely. Yes, yes, yes.

GIULIO VALESINI OFF-SCREEN

At the beginning of the year, Gianclaudio Torlizzi, from Luiss, wrote a study that reached the desks of all those who pull the strings, including the Ministry of Defence - where he works as a consultant - and the Ministry of Economic Development. Title: "Why Italy needs a national mining plan".

GIANCLAUDIO TORLIZZI - FOUNDER OF T- COMMODITY CONSULTING FIRM

Raw materials are militarised; they are a geostrategic weapon against those who do not have them.

GIULIO VALESINI

So, those who possess ore deposits are probably ruling the game right now. Who has them?

GIANCLAUDIO TORLIZZI - FOUNDER OF T- COMMODITY CONSULTING FIRM

China. They control about 90% of the green-related supply chain, which is a highly pollutant process.

GIULIO VALESINI

So, China is keeping prices low to defeat its competitors. In the future, when it has a monopoly, it will raise costs again and strangle us.

GIANCLAUDIO TORLIZZI - FOUNDER OF T- COMMODITY CONSULTING FIRM

This is the most likely scenario.

CATALDO CICCOLELLA

Do you think the Italian mining industry can flourish again?

ADAM FAN – PRESIDENT OF THE SHANGHAI METAL EXCHANGE

Globally, areas like Africa and Australia offer more convenient economic conditions. Italians give their best with Lamborghini, Ferrari or the Opera.

CATALDO CICCOLELLA

So, we won't be able to produce batteries with the European ores?

ADAM FAN - PRESIDENT OF THE SHANGHAI METAL EXCHANGE

Not by yourselves, you don't have enough of it. But maybe, in ten or twenty years, when e-vehicles become mass products, you will gain a certain autonomy through recycling, like what is happening now with lead.

SIGFRIDO RANUCCI IN STUDIO

The president of the Shanghai Metal Exchange makes fun of us. Do what you can do best: race cars and operas, and we will take care of the rest, at least until we can recycle their raw materials from the batteries. In contrast, as for mining titanium from the Ligurian UNESCO-protected site, Urso's project might get bogged down in legal issues. It ended up in court because the population opposed even excavating around the park. Under the spotlight were also Elon Musk, Tesla,

and their green revolution. Musk was criticised for the way he collected raw materials and managed his first Gigafactory, established in one of the most modern areas in Germany, with consequent deforestation of the land and contamination of the groundwater.

GIULIO VALESINI OFF-SCREEN

Elon Musk's Gigafactory is in the Brandenburg region, 35 kilometres from Berlin. It is the first Tesla factory in Europe. They produce famous cars and lithium batteries. Elon Musk opened the plant last March, improvising dances and delivering the first 30 Teslas personally. 300 ha of forest were cut down to make room for the plant's 227,000 square metres. The Gigafactory was built in the Land's drinking water protection area, now associated with water depletion and suspected underground contamination.

GIULIO VALESINI

What are the adverse effects of Tesla's presence here?

STEFFEN SCHORCHT - VNLB ENVIRONMENTALIST ASSOCIATION

This is one of the driest regions in Germany. The situation got worse with Tesla.

GIULIO VALESINI

But what is the issue? Water scarcity or Tesla's plant, which might pollute, or is polluting groundwater?

STEFFEN SCHORCHT - VNLB ENVIRONMENTALIST ASSOCIATION

According to the contract, Tesla can use water equal to that of a small village of 40 thousand people. The water bound by contract cannot be employed for other projects such as building schools, housing or other premises. Meanwhile, Tesla uses many chemicals in production, which puts groundwater at risk.

GIULIO VALESINI

Why water concerns you?

STEPHANY - INHABITANT OF BRANDENBURG

We know nothing about the accidents that may occur in the factory and how chemicals might end up in the water. I fear this place will become like the USA, where you can only drink bottled water and not tap one.

GIULIO VALESINI

What did Tesla say about the accidents?

STEPHANY - INHABITANT OF BRANDENBURG

They said they had removed the chemicals, and nothing ended up in the groundwater. But can we verify that personally? Indeed, no.

GIULIO VALESINI OFF-SCREEN

This plant treats groundwater to make it drinkable. Last year, for the first time in the history of Germany, the authorities decided to ration water for the new inhabitants of Brandenburg Land.

ANDRÉ BÄHLER - PRESIDENT OF WSE - BRANDENBURG WATER AUTHORITY

We have been recording a reduction of groundwater for the last ten years. This means that the underground water we drink gets lower and lower. While the demand increases. We are in debt to those who will need water in the future.

GIULIO VALESINI

By contrast, how much water does Tesla take from you annually?

ANDRÉ BÄHLER - PRESIDENT OF WSE - BRANDENBURG WATER AUTHORITY

We agreed with Tesla a maximum limit of 1.8 million cubic metres per year. It is more than 10% of the total water allocated.

GIULIO VALESINI

You have started to ration water. Is that true? Do you ration it for the citizens?

ANDRÉ BÄHLER - PRESIDENT OF WSE - BRANDENBURG WATER AUTHORITY

Yes.

13.08.2021 JOURNALIST

Some critics talk about a water problem in the region.

ELON MUSK

This region has plenty of water. Take a look around you.

JOURNALIST

Locals say they have no water for...

ELON MUSK

Completely wrong. There is water everywhere. Does this place look like a desert to you?

JOURNALIST

Thank you.

ELON MUSK

It is ridiculous.

GIULIO VALESINI OFF-SCREEN

The National Environmental Office has reported twenty-six environmental accidents since the plant opened, including fires and the leakage of diesel and paint. Environmentalist associations got even more concerned after Tesla presented a design to extend the plant to increase the production to one million cars per year and hire over 20 thousand employees.

ANDRÉ BÄHLER - PRESIDENT OF WSE - BRANDENBURG WATER AUTHORITY

We are informed about the accidents only after they occur. We can go on-site and carry out our measurements and sampling. But it is too late when it comes to groundwater.

GIULIO VALESINI

Is the water authority opposing Tesla's enlargement project?

ANDRÉ BÄHLER - PRESIDENT OF WSE - BRANDENBURG WATER AUTHORITY

Yes, but we have no power to stop Tesla's extension.

GIULIO VALESINI OFF-SCREEN

The green light is in the National Agency for the Environment, which wants to conduct a hearing with the other authorities involved to analyse the critics. Environmental activists question the documents submitted by the US company. Hundreds of pages and data are hidden to avoid disclosing industrial secrets.

STEFFEN SCHORCHT - VNLB ENVIRONMENTALIST ASSOCIATION

Many chemicals were hidden, and problems emerged while examining the claims. They had not been submitted on time.

GIULIO VALESINI OFF-SCREEN

Jörg Steinbach is the Ministry of the Economy of the Brandenburg's Land. He flew to the USA in March to personally hand a letter supporting Tesla's enlargement project. He visited Elon Musk's plants in Austin wearing a t-shirt branded Tesla, as he proudly shared on his X profile.

JÖRG STEINBACH – MINISTRY OF THE ECONOMY - LAND BRANDENBURG It is a history of great economic success for us. Currently, we have between 11 and 12 thousand employees.

GIULIO VALESINI

You openly took the sides of Tesla. And this was taken by many as a submissive attitude towards Tesla and Elon Musk. You made a mistake by wearing the Tesla t-shirt as you are a Minister appointed with a public office; I don't know ...

JÖRG STEINBACH - MINISTRY OF THE ECONOMY - LAND BRANDENBURG I don't know if it was a mistake because I only support what I consider correct. I am the Ministry of Economy. I am trying to promote the growth of the Brandenburg economy.

GIULIO VALESINI

We interviewed the President of the Water Authority, and he told us that, for the first time in German history, you had to ration water in your territory.

JÖRG STEINBACH - MINISTRY OF THE ECONOMY - LAND BRANDENBURG Yes, the authority did this, but there was no reason to do so.

GIULIO VALESINI

As for Tesla's extension project, many pages are missing, and many parts and data are hidden to protect industrial confidentiality.

JÖRG STEINBACH - MINISTRY OF THE ECONOMY - LAND BRANDENBURG We have a highly competent authority who knows all the data in the document is protected by confidentiality. The final decision on the authorisation will be based on all the information at our disposal, in compliance with the law.

SIGFRIDO RANUCCI IN STUDIO

In short, Elon Musk is opening its Gigafactories around the world. He opened one in China, too, to control the electric supply chain; we saw that, but the country is out of control from an ethical and environmental perspective. Also because, to reach the targets set out in the New Green Deal, we entitled China to pollute at our place while we keep our conscience clean. In 2022, China produced 29% of GHG global emissions, compared to Europe, which produced 6.6%. China produces electric cars in coal-powered factories. Some thousand miles from Brussels, another country is paying Europe's objective to become the world's leading e-mobility continent. The only fault of this population is that they live on a cobalt mine.

GIULIO VALESINI OFF-SCREEN

The Kolwezi area in Congo is rich in cobalt, another ore used to manufacture batteries. But instead of being a blessing, it became a misfortune for local populations. Amnesty International reported the case. The mine should be enlarged at any cost so it swallows populated areas and people are forced into displacement.

KANINI MASKA – INHABITANT OF KOLWEZI

Our water sources. Our cattle. The schools where our kids went to learn. Our hospital. Our market. The stadium where our children used to play. Our churches. We lost everything.

CANDY OFIME - AMNESTY INTERNATIONAL

The ore demand increases, and the mine must be enlarged. This is why, since 2016, locals have been evicted without prior notice and no chance to negotiate. Those who refused to leave their homes were forced into violence. A two-year-old girl was even burnt by the soldiers sent by the mining companies.

KANINI MASKA - INHABITANT OF KOLWEZI

We asked ourselves whether it was a war or something else. The soldiers had rifles, and we were scared to death when we saw them burning our houses on the way back from the fields.

GIULIO VALESINI OFF-SCREEN

Kolwezi is a village of about 500 thousand inhabitants, entirely developed in a mining area. The population risks almost total deportation; new houses will be demolished.

JOSEPH KITENGE - INHABITANT OF KOLWEZI

They burned my house and stuff. Now they won't give us any compensation. I will fight to have it, but my daughter is suffering terribly because of the violence she had to withstand, and nothing could pay us back for what happened.

GIULIO VALESINI OFF-SCREEN

In addition to the damage, there is also the mockery. The multinationals have promised compensation, only to hand out pennies. Elon Musk draws cobalt from this area and has also made a deal in Bolivia to grab lithium, another critical element for batteries.

FROM REPORT OF 19.03.2018

SOUTH AMERICAN ENGINEER

Lithium is dissolved in water. With chemical reactions, we first have to obtain lithium carbonate; come, I will show you. Here, this is what is used in batteries. This is a half-tonne sack, 500 kg.

GIULIO VALESINI OFF-SCREEN

If lithium is oil, the new Arabian Peninsula is South America. We are in the Salar de Atacama, a salt lake at an altitude of 2,500 metres in northern Chile, one of the driest areas on the planet. This is where the world's leading lithium producers have their plants: the American Albemarle and the Chilean SQM, with which Tesla owner Elon Musk recently made a deal.

JUDITH CRUZ MORALES - PEINE LAND AND WATER COMMISSION

This is my village; there is the Albemarle mine, and to the north is SQM. The green you see is because of the underground water. We are farmers and cattle breeders, but water is becoming scarce: they use it in the mines. So they will destroy the Salar; it took millions of years to form.

JUDITH CRUZ MORALES - PEINE LAND AND WATER COMMISSION

We are entering the SQM mine, and all the pipes you see carry water to the mine.

GIULIO VALESINI OFF-SCREEN

Lithium is extracted by mixing salt with water and evaporating it in the sun. Vast quantities of liquid are used for this.

ALONSO BARROS - PEINE COMMUNITY LAWYER

The Salar is a lake under a salt cap; from here, SQM is extracting 1,700 litres of brine per second. And then there is the freshwater. In this area, SQM has five wells for 230 litres per second. A hydraulic barrier lowers the water level by drying up all these lagoons. The risk is that biodiversity will be destroyed. In 2006, when an increase in extraction was authorised, an entire generation of flamingos died; look at these pictures; these are the eggs, destroyed.

GIULIO VALESINI OFF-SCREEN

SQM was privatised in Pinochet's time. In the 1990s, it came under the control of Julio Ponche Lerou, the dictator's son-in-law and one of the wealthiest men in South America. He signed an exclusive contract to exploit lithium in the Salar de Atacama until 2030 in exchange for 5 percent of the sales of a 10,000 dollar concession fee. In return, he would earn 100,000 dollars per year.

MAURICIO DAZA - PLAINTIFF LAWYER SQM TRIAL

To secure the exploitation of the Salar, SQM has illegally financed most of the left and right parties in Chile for decades. We are explicitly talking about corruption. Despite this, the state recently signed a new contract with SQM, which includes higher royalties and a significant increase in the amount of lithium extracted, up to 180 thousand tonnes per year.

GIULIO VALESINI OFF-SCREEN

One hundred and eighty thousand tonnes of lithium have a market value of USD 2.8 billion. The renewal of the contract between the State and SQM divided the country. It ended in street riots. If lithium is the new oil, here come the new sheikhs. Bolivia, currently the poorest country in South America, is the new Saudi Arabia. In the Andes, at an altitude of 3,600 metres, after 100 km of dirt roads, you reach the Salar de Uyuni, one of the world's wonders: a salt lake covering 10,000 square kilometres.

Another wonder of nature scarred for the benefit of the other side of the world.

GIULIO VALESINI

Do you know that some consider it a minor side effect on a path to a better world, to a cleaner, fairer planet?

CANDY OFIME - AMNESTY INTERNATIONAL

All human rights are interconnected; we cannot have a clean, healthy and sustainable environment in the global north at the expense of other human rights. Western companies need to do a human rights audit of their suppliers.

SIGFRIDO RANUCCI IN STUDIO

Among the Congolese cobalt suppliers to Tesla is Kamoto; Kamoto is controlled by the Glencore group, a multinational corporation that has made billions in extra profits on raw materials. Kamoto pays its workers 3.5 dollars a day and gives them a litre and a half of water; so much for generosity. We have realised that the extraction of materials is linked to the violation of human rights. But also to the environment, to deforestation, to the contamination of water and air, to the removal of goods without the population's consent, to the clearing of villages. Even, in short, causing the death of workers who sometimes burn alive. Can Europe bear this burden to achieve its goal of becoming the first electrified continent in the world, or will it be able to carry this burden when mining starts in our country, on our continent? Or will we have to review our lifestyles and also our transport model?