

Responsible Mining

Role of the Philippine Mineral Industry in Balancing Economic Progress and Sustainability.

Norlex B. Adsuaara
Performance and Sustainability
www.hmdcph.com



**Helix
Mining and
Development
Corporation**

We are all **ACHIEVERS!**

the 70th ANMSEC is the testimony on how we were able to cope up..



70th Annual Mine Safety and Environment Conference

"Endurance and Innovation for Sustainability"

MINERALS INDUSTRY SYMPOSIUM 2024

November 21 | CAP Camp John Hay, Baguio City

- with the challenges to deliver our commitments.
 - proven that the mineral industry is not a “DESTROYER” but a partner in mitigating the effects of global warming.
- I would like to take this opportunity to introduce and rebrand our company, Helix Mining and Development Corporation



Helix
Mining and
Development
Corporation

Who **WE** are!

We provide key ingredients for the cement manufacturing.

La Union, Bulacan, Lugait and Davao



Limestone

An important ingredient in manufacture of cement, limestone is a sedimentary rock mainly composed of calcium carbonate (CaCO_3). It is formed through accumulation and compression of carbonate-rich organic debris including shells and corals in marine environments that hardened over time into limestone deposits.

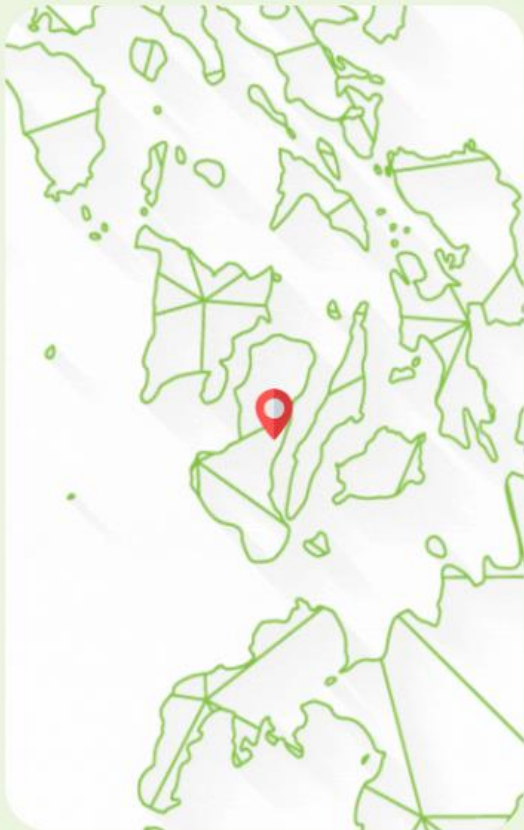
**RAW MIX CORRECTIVE TO
INCREASE STRENGTH AND TO
REDUCE CO2 FOOTPRINT**

Shale



Silica in Ayungon Negros, Oriental

widely used in glass manufacturing, water treatment, paints and coatings industry, as well as electronics industry.



Quarry Site
Ayungon



>90%
SiO₂

**VITAL COMPONENT FOR
FIBERBOARD
MANUFACTURING**



Basalt in Angono, Rizal

As a sustainable resource, basalt aggregates also support eco-friendly construction practices, making them a popular choice for modern infrastructure projects.

**HIGHLY DURABLE
CONSTRUCTION MATERIAL
RESISTANT TO HEAT,
WEAR, WEATHER, AND
ACID**



15,000 - 23000
psi compressive strength

**S1, S3, 3/8",
3/4", G1, G2**
sizes



Pozzolan

Cement Filler for Greener Production

By incorporating pozzolan into construction materials, manufacturers can lower carbon emissions, decrease energy consumption, and promote eco-friendly building practices, making it a key ingredient for greener production in the construction industry.



> 70%
Pozzolanic Activity Index
(PAI)



We produce raw materials not only for the construction industries
Animal feeds, fertilizers, pulp and paper industries, foundries, soil stabilizers & etc.



Beyond our mining operations,

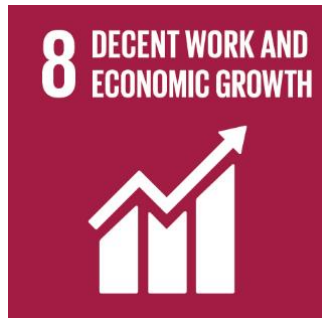
We are committed to fostering the long-term success of the communities in which we operate by prioritizing

Ecological Sustainability, Social Responsibility and Cultural Preservation. *Perfectly aligned with*

THE 17



SUSTAINABLE DEVELOPMENT GOALS



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



15 LIFE
ON LAND

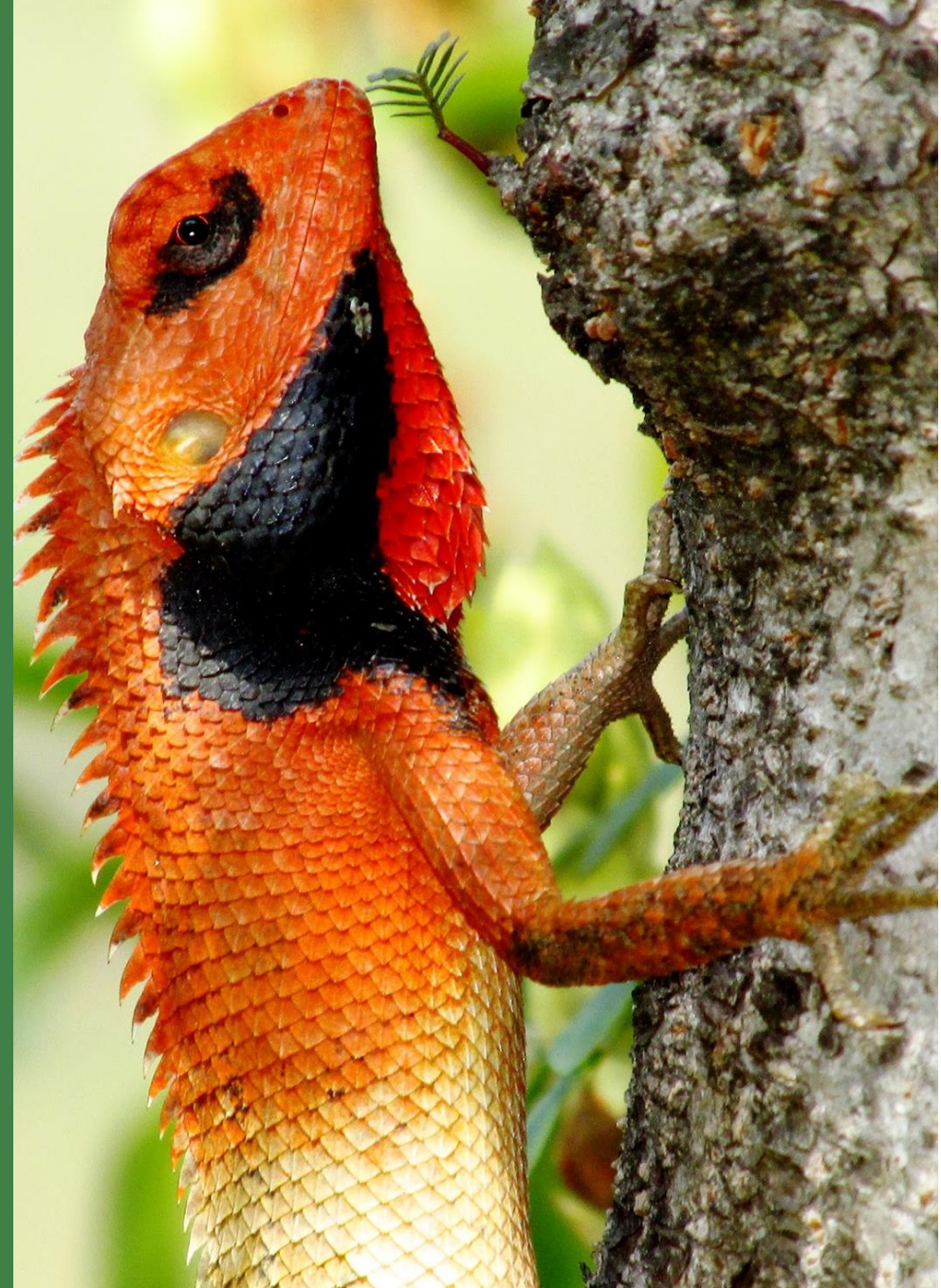


13 CLIMATE
ACTION



Our **Strength** **lies**
in paving the
FOUNDATION
for *the*

Through the
Biodiversity
Indicator and
Reporting
System
(BIRS)



Envi Initiatives

Our envi activities support 7 out of the 17 United Nations Sustainability Goals (UN SDG)



- We continually assess our biodiversity through **flora and fauna inventory** and habitat assessments through the Biodiversity Indicator Reporting System (BIRS) as our commitment to environmental sustainability in areas impacted by our operations.



Top, left to right: *Turnix suscitator*, *Megalurus palustris*, *Pycnonotus goiavier*
 2nd Row, left to right: *Chalcophaps indica*, *Phapitreron leucotis*, *Cyornis rufigaster*
 3rd Row, left to right: *Oriolus chinensis*, *Artamus leucorhynchus*, *Lalage nigra*
 4th Row, left to right: *Halcyon chloris*, *Halcyon smyrnensis*, *Actenoides lindsayi*
 Bottom: left to right: *Copsychus saularis*, *Caprimulgus manillensis*, *Otus megalotis*



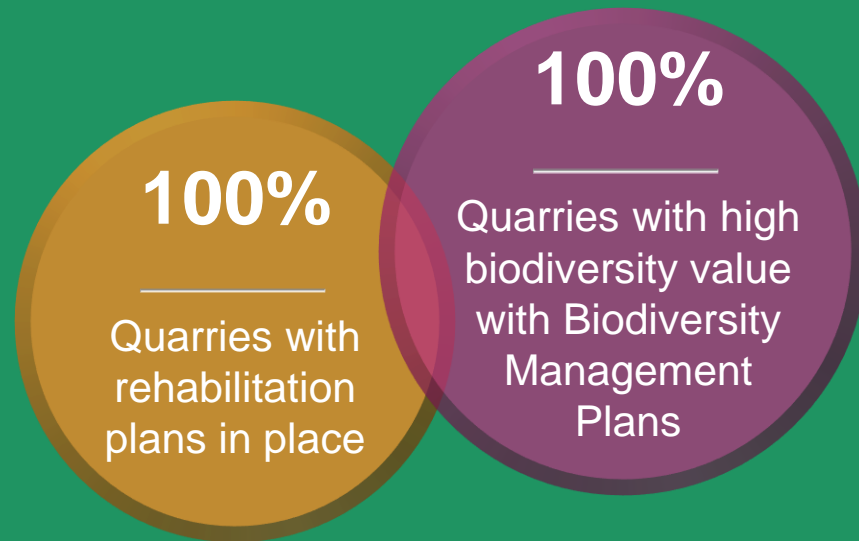
Top, left to right: *Kaloula pulchra*, *Hylarana erythraea*, *Bronchocaela cristatellus*
 Bottom, left to right: *Gecko gekko*, *Eutropis multifasciata*, *Dendrelaphis pictus*



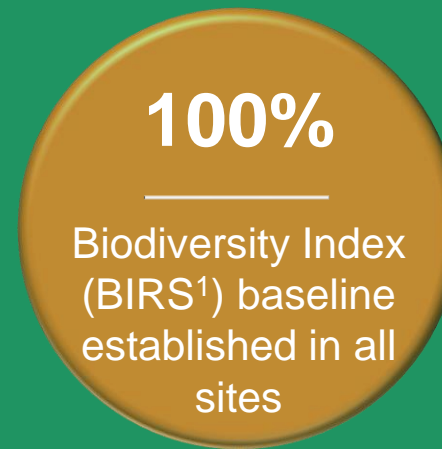
Top, left to right: *Suncus murinus*, *Rattus tanezumi*, *Ptenochirus jagori*
 Bottom, left to right: *Cynopterus brachyotis*, *Rousettus amplexicaudatus*, *Eonycteris spelaea*

Group's Biodiversity 2030 Commitments

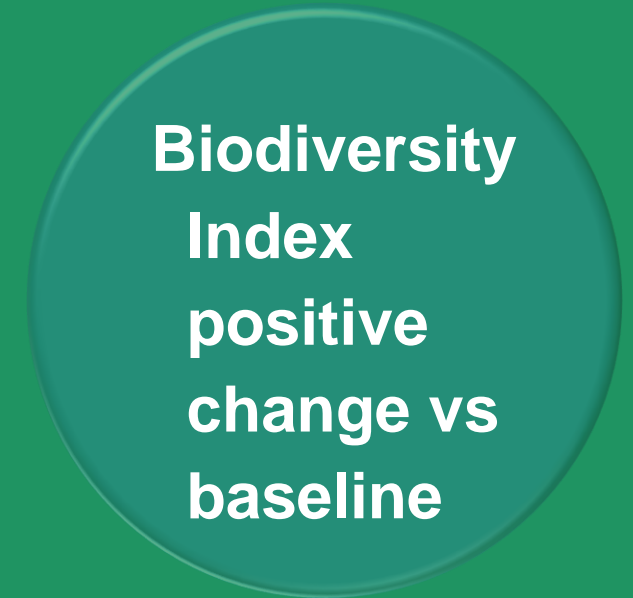
Measurable positive impacts on Biodiversity



MILESTONES 2022
REACHED



MILESTONE 2024
ON TRACK



COMMITMENT 2030

¹ Biodiversity Indicator and Reporting System developed by International Union for Conservation of Nature (IUCN)

Transformative Progressive Rehabilitation

By changing the way we are rehabilitating, we are enhancing the biodiversity



TRADITIONAL REHABILITATION

Mainly restores monoculture forests

Site Biodiversity index* ~ 3.5

vs.



TRANSFORMATIVE REHABILITATION

Encompasses natural processes, endemic species and wider landscape habitats

Site Biodiversity index* ~ 5.0

Water Resources are getting SCARCE!

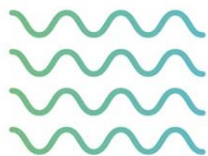
Implementing initiatives (i.e. water balance) in our operations and beyond the fence

OWN OPERATIONS



Improve water use efficiency and reduce pollution

Optimize water use and implement strict standards to ensure discharge of high-quality treated water



Shift to non-freshwater withdrawal

Replace freshwater with sea or treated wastewater



Maximize rainwater harvesting

Use harvested rainwater to meet site water requirements



Access to WASH

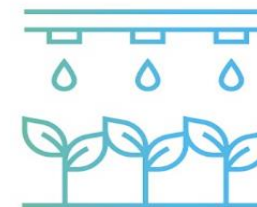
Provide water, sanitation and hygiene for all employees and contractors (WASH pledge)

BEYOND SITE BOUNDARIES*



Watershed protection and restoration

Revitalize degraded wetlands, recharge of groundwater and promote reforestation to improve water flow back to basins



Water for productive use

Promote water-efficient irrigation and agriculture practices to help relieve water stress in watersheds

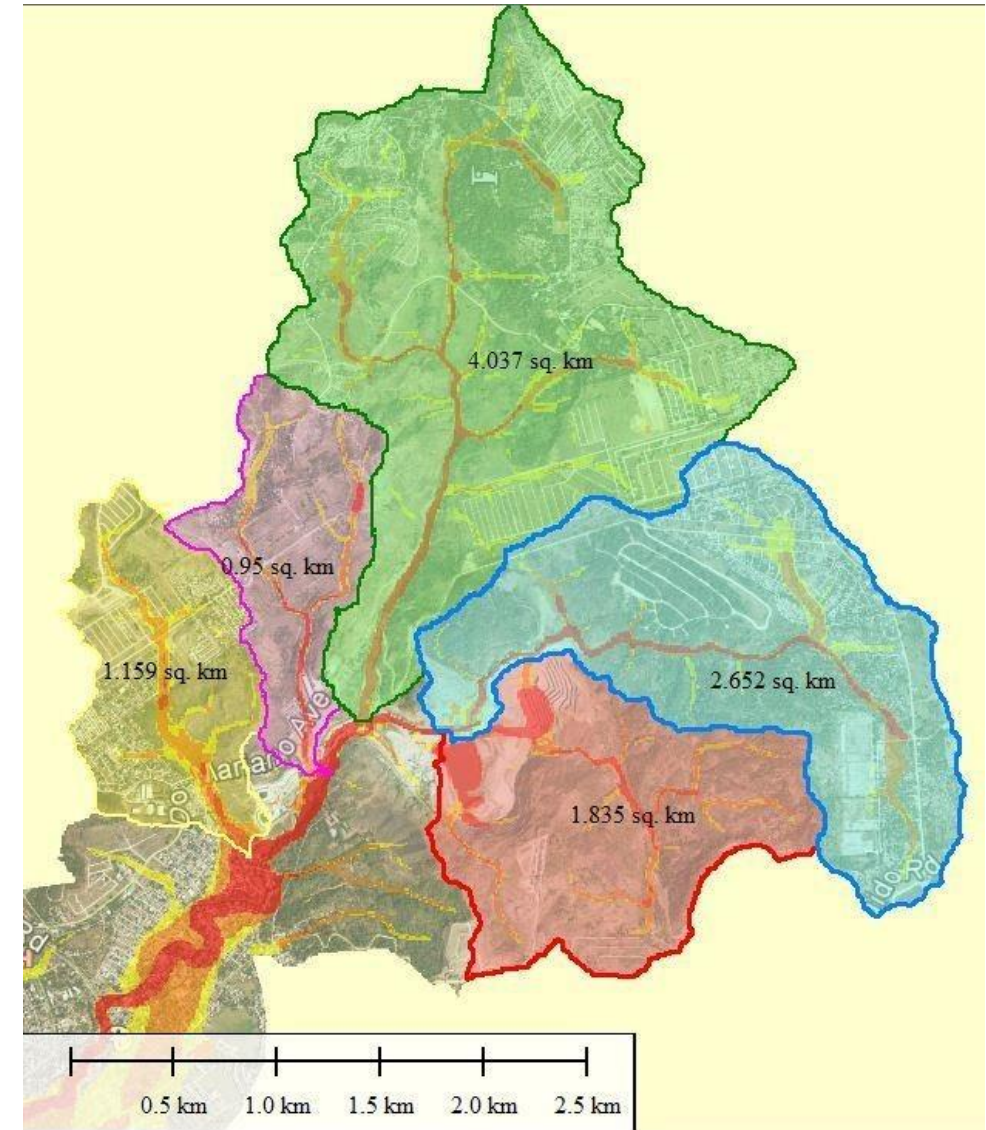
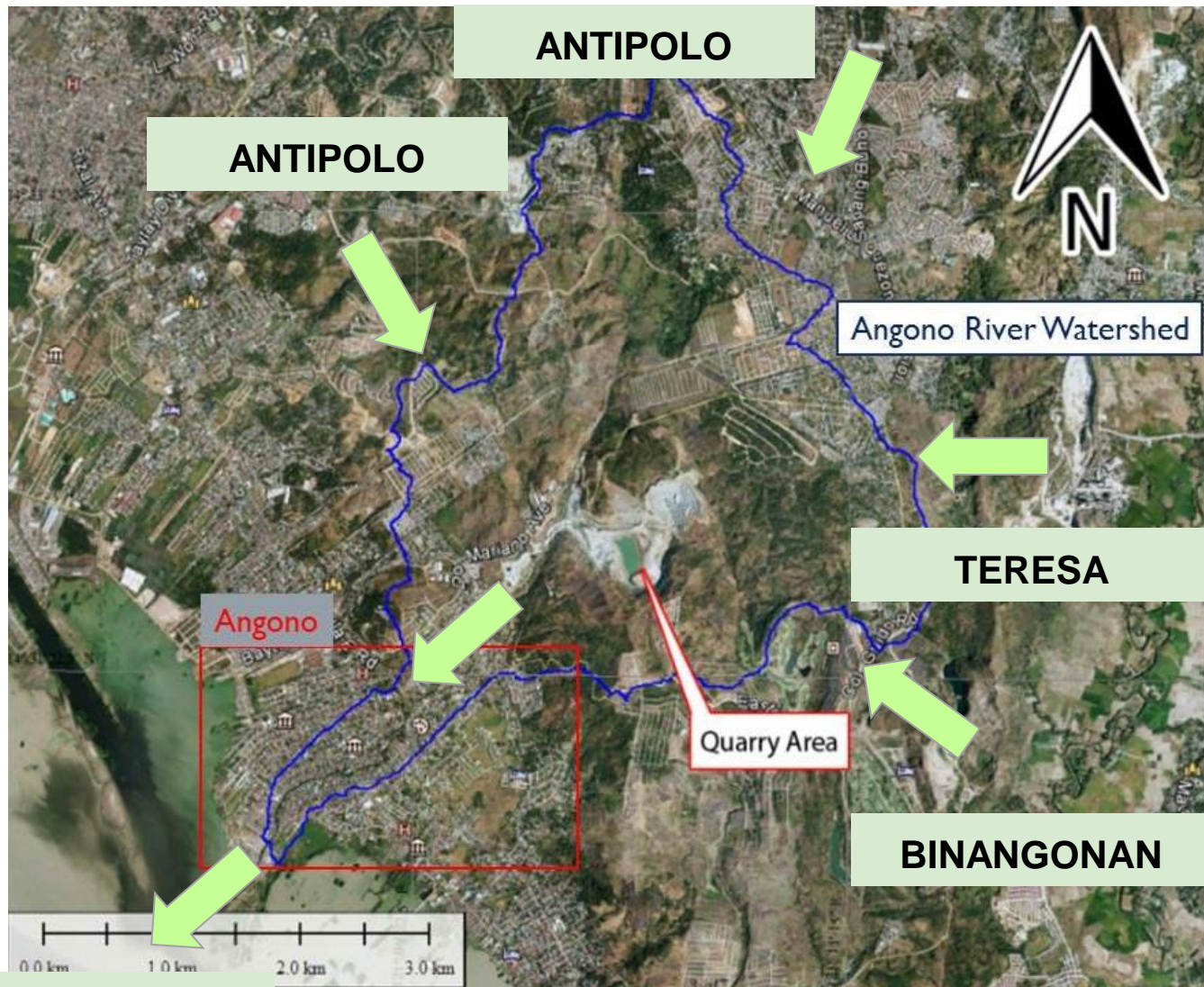


Water access and sanitation

Support communities with supply of potable water and installation of sanitation facilities to improve well-being of people and communities (WASH pledge)

Angono, Rizal Geomorphology

Situated at a lower elevation than Antipolo, Angono receives run-off water from five tributaries.



Angono, Rizal Geomorphology and HAI

Three of the five tributaries feeding the Angono River pass within the boundaries of the quarry



Our pit absorbs surface runoff and bodies of water

Normal Capacity: 600 Olympic size swimming pool (dry months); FULL: 1,500

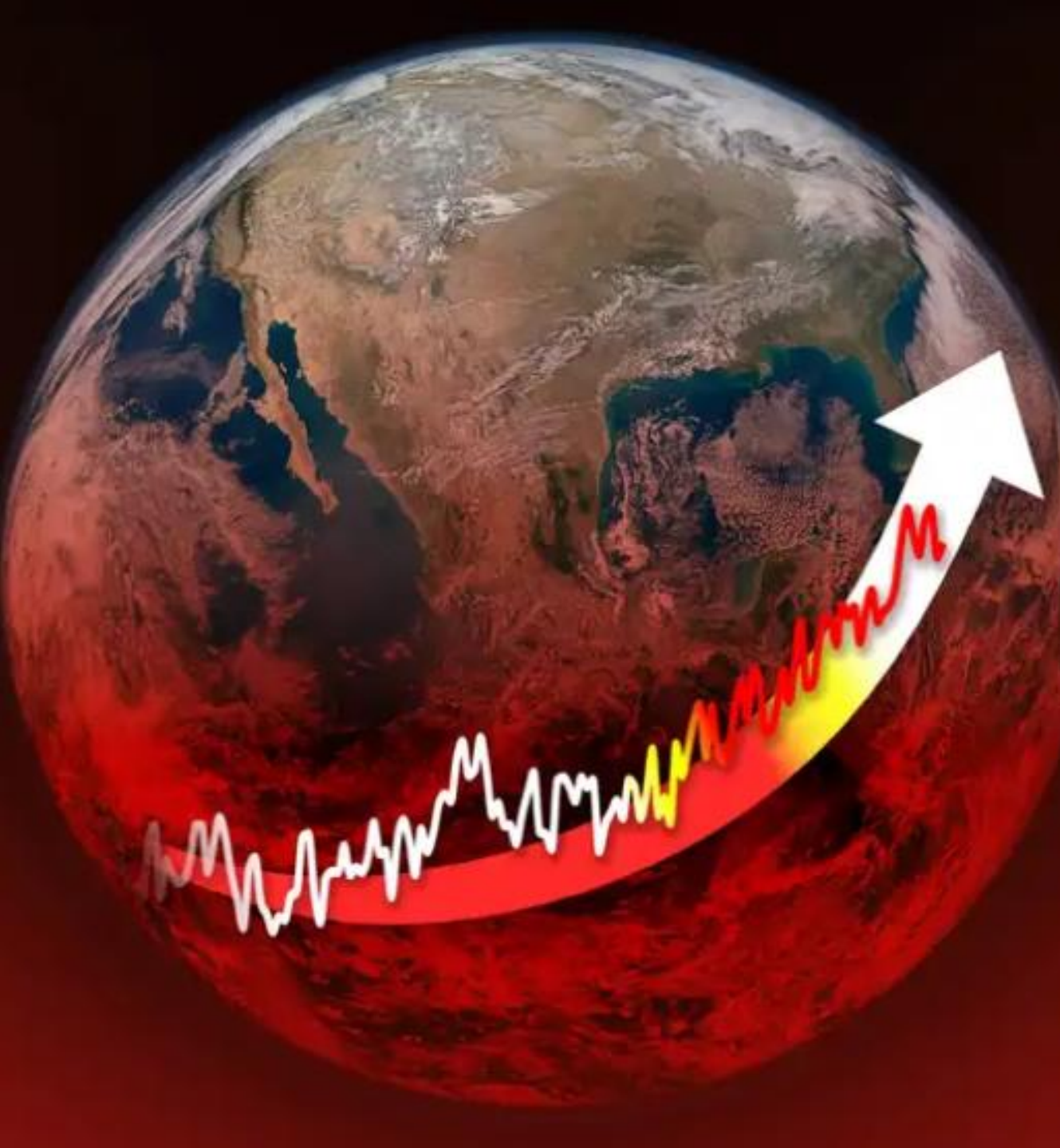
- No withdrawal from the natural sources

- Utilize for road spraying and in process cleaning

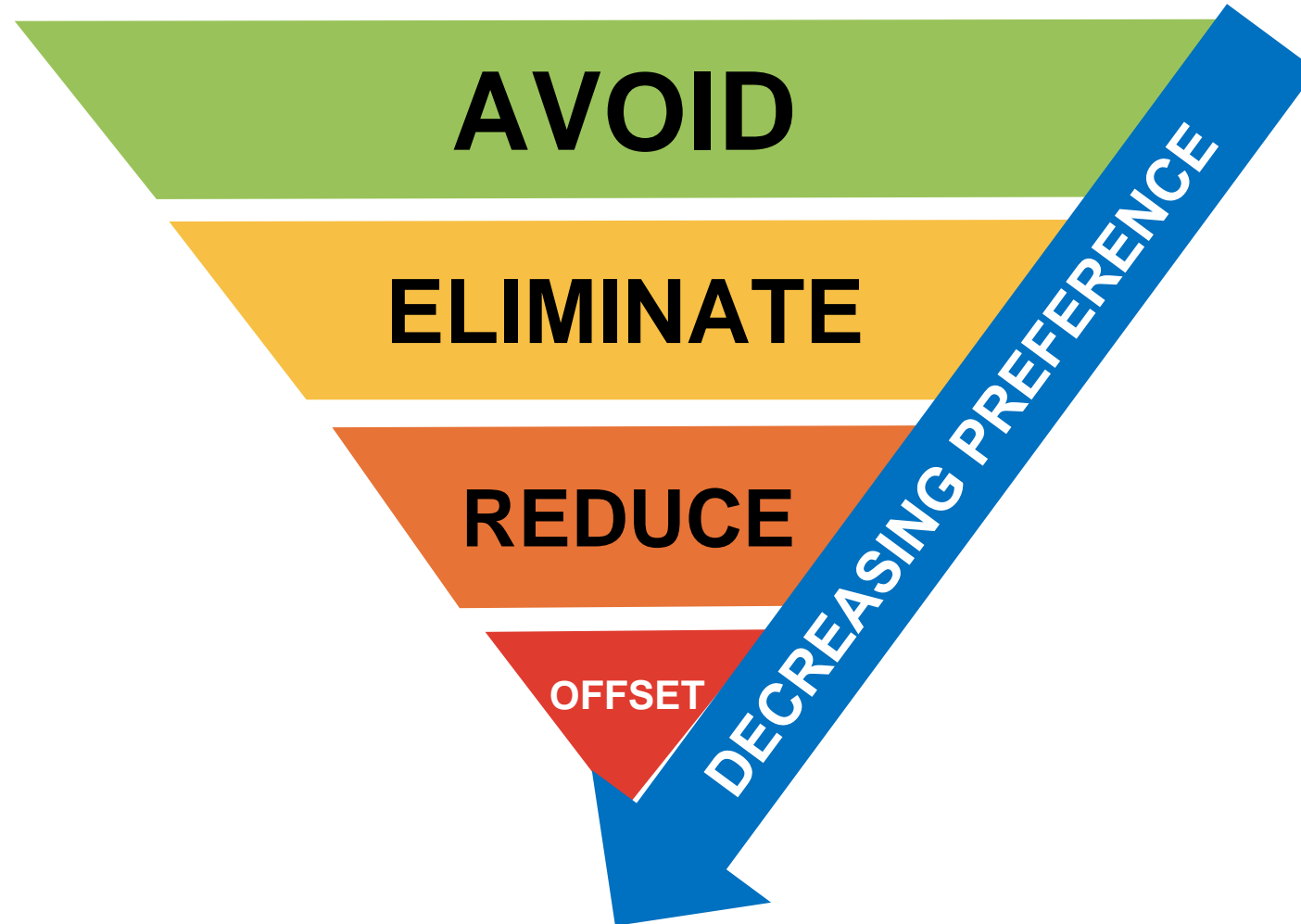
- process water recirculation



Capable of holding three (3x) Carina's water intensity



We all know that the effects of climate change is Irreversible,
It's not TOO late to implement change



DECARBONIZING BUILDING



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



11 SUSTAINABLE CITIES
AND COMMUNITIES



**BECOMING THE
GLOBAL LEADER
IN INNOVATIVE
AND SUSTAINABLE
BUILDING SOLUTIONS**

®Holcim

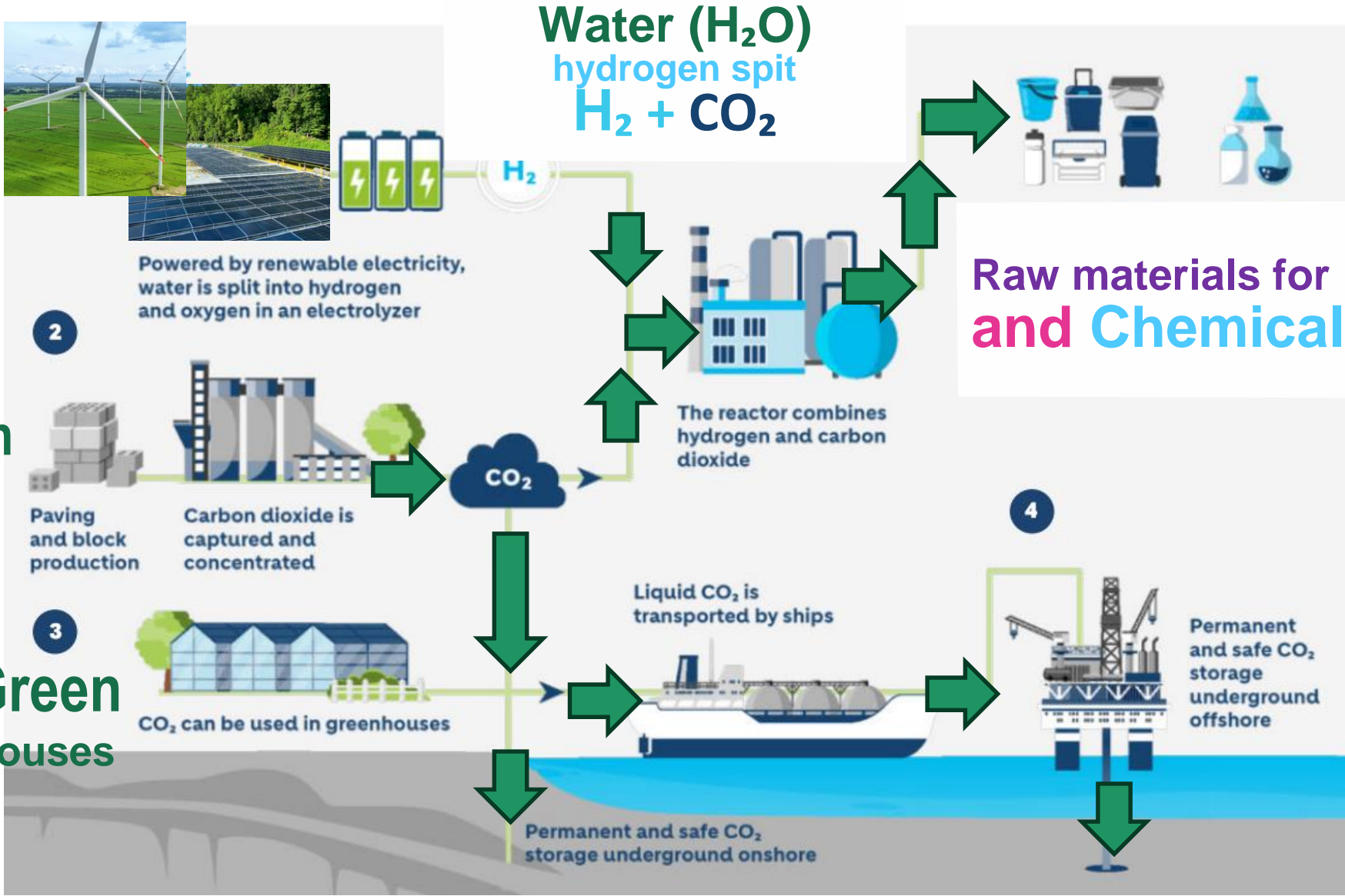


AVOID (hauling) —
gradual phase out of
internal combustion
engines on load and haul
fleets.

CARBON CAPTURE, UTILIZATION AND STORAGE

Low CO₂
construction
materials

Green
Houses



Some examples of recycled & low CO₂ concrete



- Lower CO₂ with less clinker produced.
- Aggregates with 30% recycled concrete.

Our industry + the Government
CLEAR cut policies on climate actions
and LGU's should collectively act

on

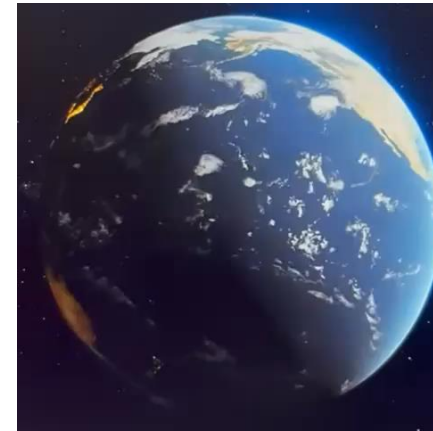
Planet Earth's

CARBONIZATION

NET
ZERO

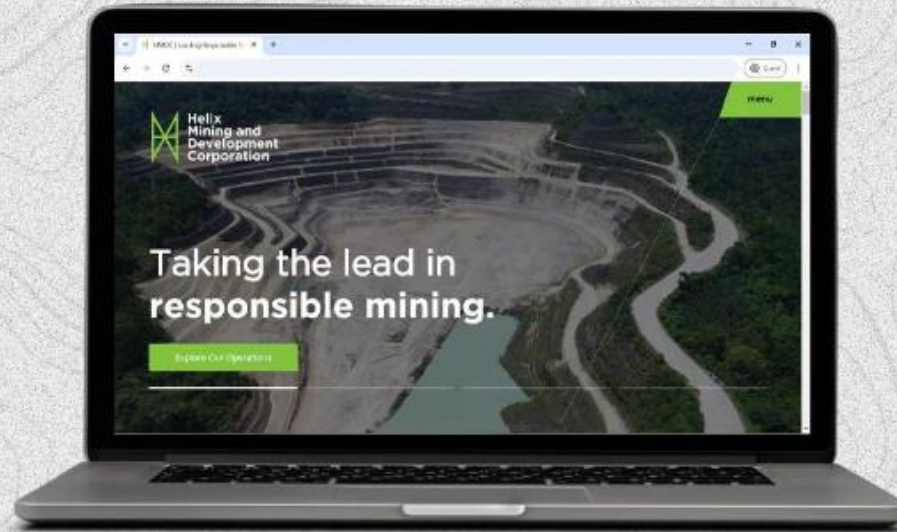
17 PARTNERSHIPS
FOR THE GOALS





OUR **OFFICIAL WEBSITE**
IS NOW UP!

VISIT HMDCPH.COM



Visit
hmdcph.com
Like us on:



References

- Holcim Sustainability Report 2023
- ¹ Biodiversity Indicator and Reporting System developed by International Union for Conservation of Nature (IUCN)