

The integration of biodiversity in the sustainability strategy of HeidelbergCement

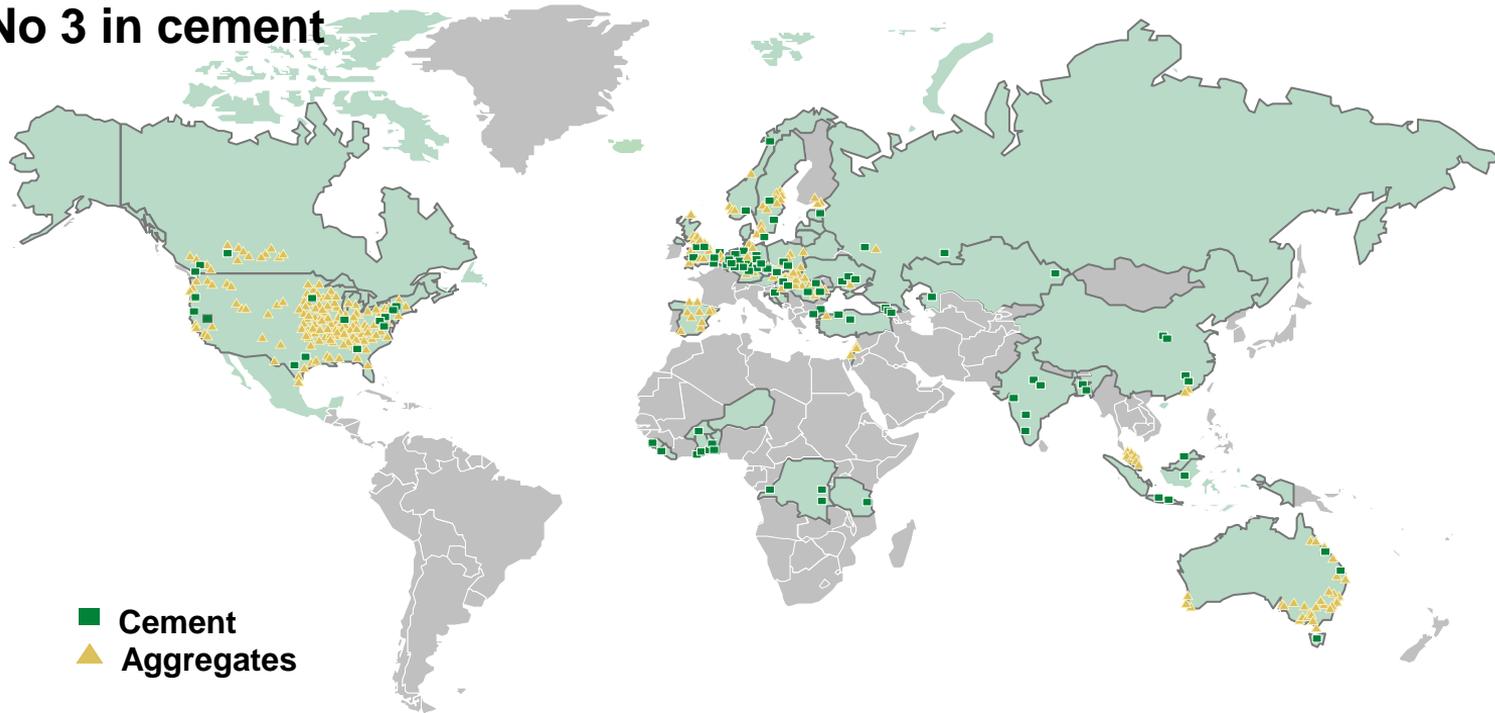
by Dr. Michael Rademacher

Director Biodiversity & Natural Resources, 2015



HeidelbergCement in the world

- No 1 in aggregates
- No 2 in ready-mixed concrete
- No 3 in cement



May 2015

2 - HeidelbergCement – Biodiversity at mining sites

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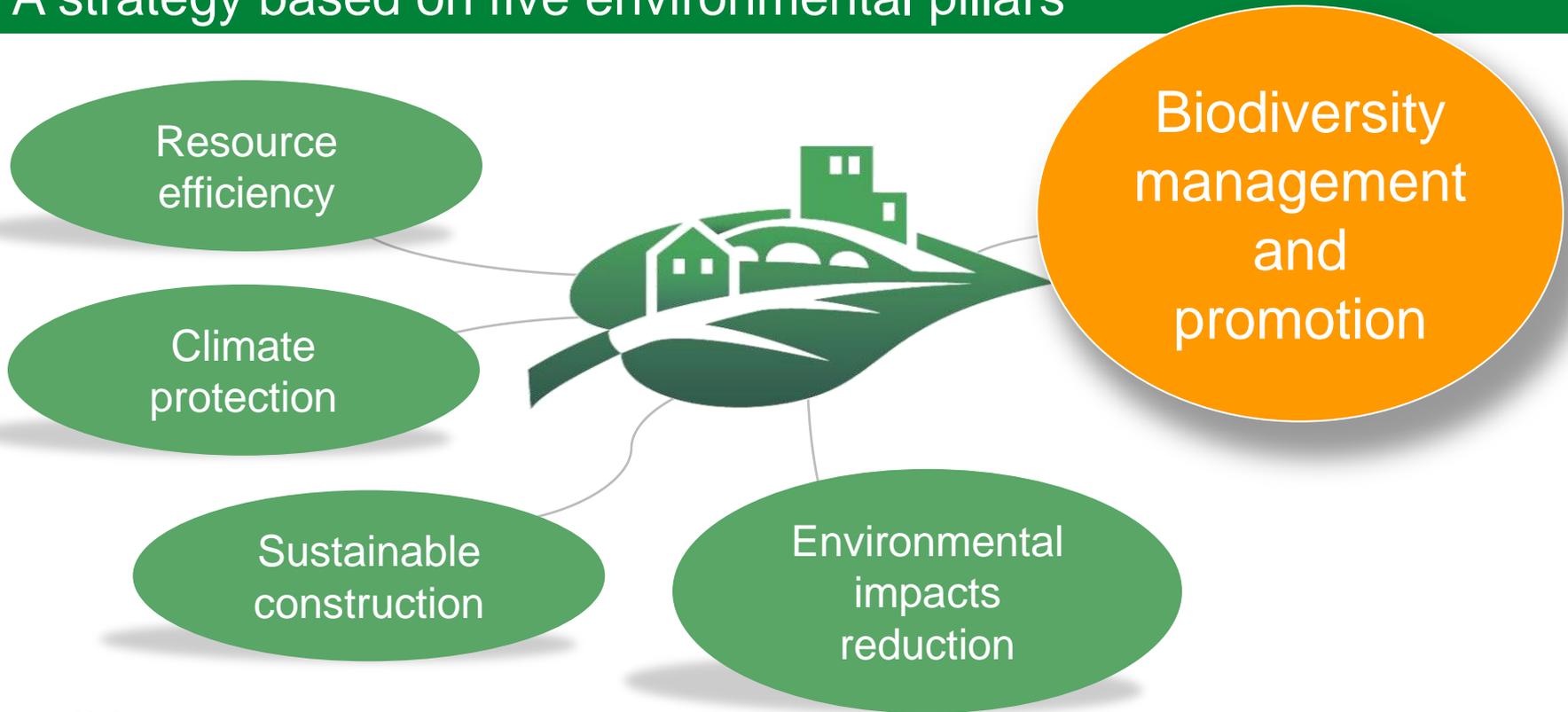
HeidelbergCement Group

- **45,000 employees**
- **2,350 locations in more than 40 countries worldwide**
 - 500 production sites for sand, gravel, and crushed rock
 - 102 cement and grinding plants
 - 1,300 ready-mixed concrete plants
 - 110 asphalt plants
- **Cement capacity 129 million tonnes (incl. joint ventures)**
- **Aggregates reserves 18 billion tonnes**



HeidelbergCement sustainability ambitions 2020

A strategy based on five environmental pillars



Quarries: an opportunity for biodiversity

Quarries show a high level of biodiversity thanks to 4 main factors:

- Variety of different habitat conditions
- Habitats that are poor in nutrients
- Dynamic landscape due to mining activities
- Marginal disturbances



Modern extraction and after-use planning can provide real benefits for nature

Biodiversity promotion at mining sites

During extraction period



Well planned extraction operations create dynamism in the landscape



- Continuous creation / regeneration of habitats (wanderbiotopes)
- Endangered pioneer species
- Spontaneous succession

After extraction activities



Well designed rehabilitation plans for sustainable land use



- Diverse landscape with high biodiversity
- High ecosystem value
- Economical and ecological benefit for the local community

Good biodiversity management brings extra benefits

The International Council on Mining and Metals (ICMM 2006):

- Ensure access to land (raw material reserves)
- Raise reputation (influence positive the perception of communities)
- Open access to capital linked to Equator Principles
- Increase of investor's confidence and loyalty
- Shorter and less contentious permitting cycles
- Improvement of community relations



Nature conservation management and public relations are essential for a sustainable raw materials extraction

Biodiversity management at HeidelbergCement

- A global biodiversity **policy, principles & targets**, implemented by a team of in-house ecologists
- Global **KPIs** and operational **monitoring indicators**
- First company of its sector to publish an “**Internal Guideline for biodiversity management in quarries and pits**”
- **Trainings** to our employees and workers
- **Partnerships** with NGO's:
 - Partnership with BirdLife International
 - Partnership & projects with local NGO's
- **Public Private Partnerships** with GIZ in:
 - Georgia, Tanzania



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HeidelbergCement biodiversity management principles

Protecting nature and the environment

- Protection of soil and subsoil
- Avoidance of contamination of ground or surface water
- Priority to local plant species

Increasing biodiversity

- Promotion of biodiversity even in active quarries
- Site specific restoration plans to be carried out by specialists
- Consideration of ecological and economical value of the after-use land
- Natural development of certain areas within quarries

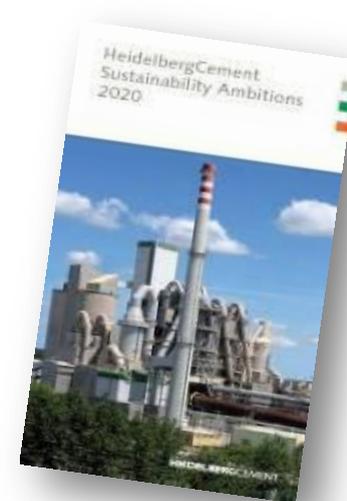
Encouraging dialogue

- Dialogue with all stakeholders
- Forms of after-use to be discussed with all involved third parties (environmental authorities, nature conservation organisations, local communities)



Biodiversity KPIs and Ambitions for 2020

Business line	Key Performance Indicators	Ambition 2020
CEM	Percentage of quarries under active exploitation with restoration plan	100%
AGG		100%
CEM	Percentage of mining sites “with high biodiversity value” ¹ where biodiversity management plans are actively implemented	50%
AGG		Target under development

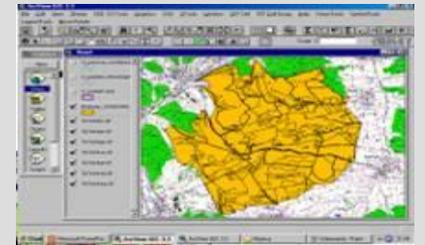


1) « High biodiversity value areas » are defined according to the GRI EN11 (Global Reporting Initiative Indicator)

Biodiversity monitoring indicators at site level

- Adapted for active and depleted extraction sites
- Developed with the support of scientific experts
- A few examples:
 - *Number of habitats in the mining sites / Surfaces of the mining sites (ha)*
 - *Number of plant species on the mining site / number of plant species in the surrounding area (500m corridor)*
 - *Portion of endangered species on the mining site / Portion of endangered species in the surrounding area*

The effect of our actions on plant and animal species have become measurable and predictable



Training for our employees

'Biodiversity for non biologists'

Training material

Posters



Les espèces à protéger sur les crânes rous

Les mites

Les plateaux et talus de calcaire rous

À privilégier :

- Préserver les habitats naturels
- Eviter les travaux de déblaiement
- Eviter les travaux de terrassement
- Eviter les travaux de construction de nouvelles infrastructures
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- Habitat and species mapping
- Technical handbook
- Exploitation and restoration guidelines

Crapauds calamite et accoucheur

Nom de l'espèce	Crapaud calamite et accoucheur
Description	Crapaud calamite Crapaud à tache rougeâtre à ligne dorsale plus éparse
Statut de protection	Crapaud accoucheur Espèce protégée en vertu de l'article 17 de la loi relative à la protection de l'environnement et de l'article 17 de la loi relative à la protection de l'environnement
Habitat	Crapaud calamite - En zone de prairie et dans des zones humides - En zone de prairie et dans des zones humides
Neurobiologie	Crapaud accoucheur - Espèce à tache rougeâtre et à tache dorsale plus éparse
Méthode de vie	Crapaud calamite - Espèce à tache rougeâtre et à tache dorsale plus éparse
Comment les protéger	Crapaud accoucheur - Préserver les parties humides et les talus de calcaire rous - Éviter les travaux de déblaiement et de terrassement dans les zones humides - Éviter les travaux de construction de nouvelles infrastructures

Source : CBR
Document : La protection de l'environnement, à la fois la connaissance et la mise en œuvre de l'écologie appliquée

Best practice – Quarry restoration & Natura 2000

Quarry “Nußloch”, Heidelberg, Germany

- Quarry supports the national strategy for biodiversity by creating habitats for the yellow-bellied toad
- Habitat creation & monitoring in cooperation with Nabu Baden-Württemberg (BirdLife International)
 - Maintenance and new installation of shallow water bodies (10 +)
 - Yearly monitoring of the amphibian population (> 100 individuals)
 - Maintenance of other Natura 2000 habitats



The population of the yellow-bellied toad is increasing!

Best practice – The Sand Martin protection programme

Taking benefit from the network of our mining sites

■ Programme scope:

- Creation of safe breeding walls
- Protection of existing breeding colonies
- Cooperation with local NGO's and local universities

■ Positive impacts:

- Prevention of the extinction of the bird
- Avoidance of potential conflicts between the interests of the quarry management and the nature conservation associations.
- HC workers proud to be a part of a protection program.
- Improved relationships with authorities, NGO's and local communities.

■ 80 sites in Europe:

- Belgium, Czech Republic, Germany, Hungary, Latvia, Norway, Spain and Poland.

> 11.000 breeding pairs counted in our mining sites



Best practice – Stakeholder dialogue

Creation of Nature Adventure Trails

■ Scope:

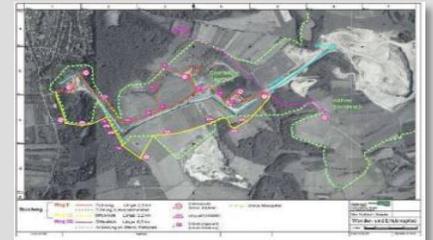
Around 80 guided tours were organized with schools, universities and other organisations every year, but more were needed...

■ Creation of 2 nature trails:

1. One accessible to the public: 2.7km long
2. One accessible only with HC guidance: 2.8km long

■ Objectives:

- Answer the increasing public interest for quarries and for biodiversity rich areas.
- Demonstrate our willingness to contribute to nature conservation.
- Share this knowledge without affecting quarrying activities.



HeidelbergCement biodiversity position

“Sustainable local mineral extraction supported by appropriate regulations”

- The sustainability of our operations requires the access to permits / licences to operate.
- We take our responsibilities to promote biodiversity during and after extraction.
- We support ambitious policies in biodiversity protection:
 - Natura 2000 areas should **not** be considered as “no-go” areas for mining activities: no automatic exclusion
 - Increase of biodiversity must be favoured in **restoration plans**
 - Consistent **enforcement** of regulations
 - Continued promotion of **partnerships**.

Local extraction of mineral materials to answer the needs for buildings and infrastructures can be combined with the promotion of biodiversity



A partnership with BirdLife International

To increase our scientific expertise and improve our biodiversity management practices

■ Joint actions to at Group level:

- Identify potential business opportunities through improved access to biodiversity data
- Build more effective Biodiversity Management Plans
- Improve reporting on sustainability indicators
- Increase contacts with essential stakeholders
- Improve policy dialogue

■ Joint actions to at Operational level:

- Identify cooperation project opportunities through joint proximity study and Biodiversity Management Plans

According to BirdLife, 153 HeidelbergCement mining sites out of 425 in Europe are considered of high biodiversity value.



The Quarry Life Award (HeidelbergCement initiative launched in 2012)

An international scientific and educational competition for students & researchers in biodiversity

3rd Edition (2016)

- 20+ countries worldwide
- 70+ participating sites
- 200+ universities involved
- Project registration: **1st March 2016**
- Field work: **April – September 2016**
- Award ceremonies: **Fall 2016**



Over **260.000€**
in prize money



Project categories

- Habitat and Species Research
- Biodiversity Management (during/after extraction)
- Education and Raising Awareness
- Beyond Quarry Borders (NEW!)
- Student Class Project



Exchange of ideas across borders

www.quarrylifeaward.com



170.000 website visitors

- A Blog for each project to share findings
- Public Vote for favorite projects
- An Online Archive of all past projects

www.facebook.com/quarrylifeaward



Join the QLA Community:



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HeidelbergCement biodiversity approach



Give back to nature more than we have taken

Quarries: ideal places to promote biodiversity!



Contact:

Dr Michael Rademacher

Group Biodiversity & Natural Resources Director

BirdLife Programme Director

Global Environmental Sustainability

michael.rademacher@heidelbergcement.com

+32 2 678 33 72