

Reducing water risks in cities

- Natural Capital Assessment of SEKISUI Chemical -

7 May, 2019

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SEKISUI Chemical Co., Ltd.

Name: SEKISUI Chemical Co., Ltd.
Headquarters: Tokyo / Osaka, Japan
Employees: Approximately 26,000

Businesses:

Residential and Social Infrastructure

Chemical Solution



Housing



Residential Services



Piping



Construction and Infrastructure



Automotive and Transportation



Life Science



Electronics

Net Sales (March, 2019): 1,154 billion yen = USD 10.3 billion = Euro 9.1 billion)

- Disruption of water supply and wastewater disposal due to aging pipelines
- Frequent occurrence of hydrological disasters due to climate change
- Shortage of drinking water



Source:
WHO, 2017
July 2017



Source:
The Guardian
March 2019

- Disruption of water supply and wastewater disposal due to aging pipelines



- ✓ SEKISUI SPR technology extends life of pipelines with pipeline rehabilitation system

+ Trenchless technology prevents traffic disruption → reduces GHG emissions

- Frequent occurrence of hydrological disasters due to climate change



- ✓ SEKISUI CROSSWAVE reduces rainwater runoff & enables effective use of rainwater / storm water

- Shortage of drinking water

- ✓ SEKISUI CROSSWAVE stores water that can be reused

+ Recycled materials reduce depletion of resources

Pipeline rehabilitation system “SPR (Sewer Pipe Renewal)”



Example of “open cut” system



Example of “trenchless” system (SPR)

- ✓ Trenchless technology
- ✓ No traffic redirections needed
- ✓ Less space demand
- ✓ Sand or soil doesn't need to be excavated



Trenchless technology

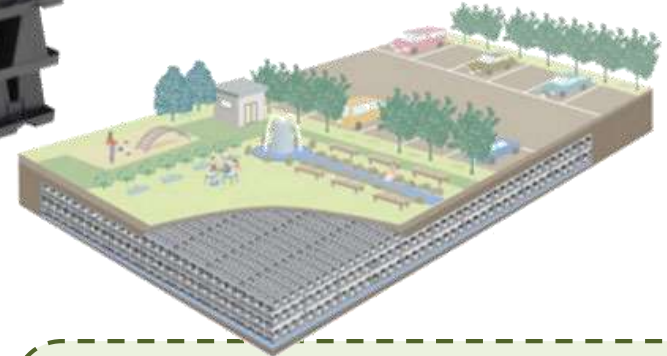


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Rainwater Storage System

"CROSS-WAVE" = rain water storage **underground**



- ✓ Short construction time
- ✓ Possible to use land above Cross-Wave (e.g. parking lot, playground, pavement etc.)
- ✓ Possible to reuse stored water

Source: <https://www.youtube.com/watch?v=BcTe3z3cfKg>



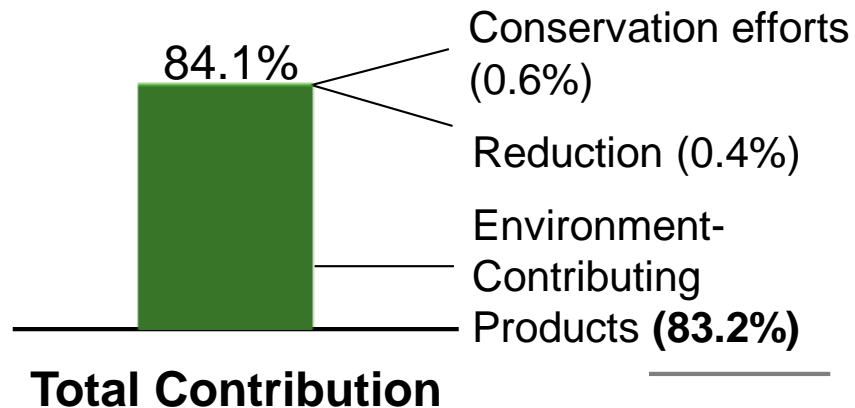
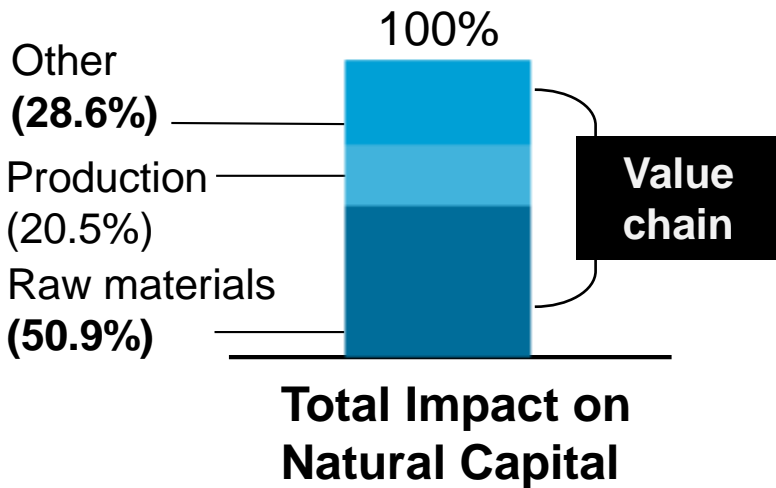
Through prominence in technology and quality, SEKISUI CHEMICAL Group will contribute to improving the lives of the people of the world and **the Earth's environment**, by continuing to open up new frontiers in residential and social infrastructure creation and chemical solutions.

Existing Definition:
Natural Environment-Contributing Products





Natural Capital: renewable and non-renewable natural resources that yield benefits to people & society (e.g., plants, animals, air, water, soils, minerals, etc.)



Data from 2017



Through prominence in technology and quality, SEKISUI CHEMICAL Group will contribute to **improving the lives of the people** of the world and **the Earth's environment**, by continuing to open up new frontiers in residential and social infrastructure creation and chemical solutions.

Expanded Definition:
Social Environment-Contributing Products

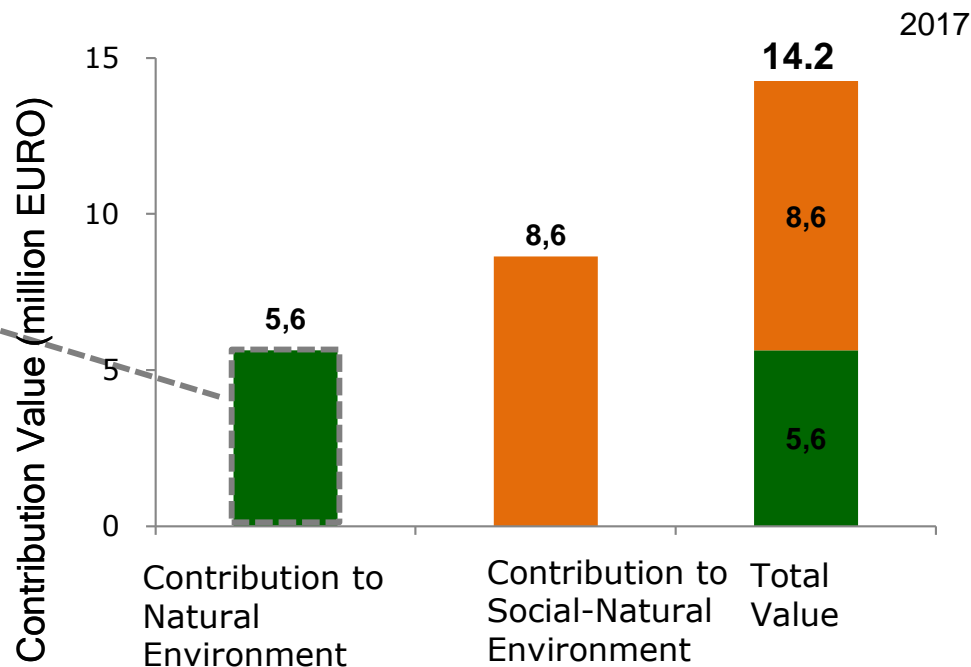
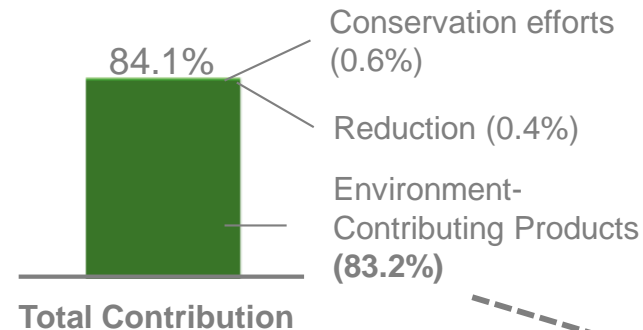
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In addition to natural environment, contribution to social environment is also considered.



Contribution to the reduction of water risks

Data from 2017



CrossWave and SPR have an overall contribution to Social and Natural Capital of EUR 14.2 mio.

What is needed to reduce water risk and create a sustainable society?

- Identify the social challenges and finding solutions
- Understanding the value of additional contribution of products that help solve those issues



- Confirm direction of market expansion and development of new products



- Further strengthen the resilience of urban infrastructure
- Maintain sanitation and hygiene of social environment
- Prevent degradation of surrounding ecological system

A new frontier, a new lifestyle.

SEKISUI CHEMICAL Group

– produce a better world with creative technologies.

SEKISUI