



DNV·GL



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



BUSINESS ASSURANCE

VIEWPOINT REPORT

Is water the next carbon?

WINTER 2015

SAFER, SMARTER, GREENER

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FOREWORD

All the food that we eat depends on water, from grain to beef. More than 70 per cent of the Earth is covered by water. 2.5 per cent of this is fresh water; the water we need to sustain life. During the 20th century the demand for water increased sixfold, while the world's population doubled. The 2015 Global Risks report¹ identifies the water crisis as one of the top risks we are likely to be facing soon. The highest in terms of impact.

It is evident that water scarcity is a global issue for which we are responsible, as individuals and as professionals too. This is not just a personal or societal question. Freshwater is a limited resource that businesses depend on and they are beginning to realize this. In addition to setting a good example and blazing a path for sustainable water management, proactive players will gain a competitive edge, as recently highlighted also by The Global Opportunity Report 2015.² Better water management is not only necessary, it also represents a business opportunity.

'Water and Sustainable Development' will also be the theme of this year's edition of World Water Day, on March 22nd.

INTRODUCTION

The global certification leader DNV GL - Business Assurance, in cooperation with the United Nations Industrial Development Organization (UNIDO) and supported by the international research institute GFK Eurisko, has investigated the water management approach adopted by companies in different sectors in Europe, North America, South America and Asia.

The survey was conducted in December 2014 and investigated the importance of water issues and the way companies deal with them, the main drivers and the main obstacles to sustainable water management, together with the initiatives implemented by DNV GL - Business Assurance customers.

Water supply is unquestionably a key topic: not only at a personal and societal level but from a business perspective too, most of all in terms of efficiency of consumption. Nevertheless, despite widespread concern, there is still a lot to do before we can turn concern into concrete commitment and responsible actions.

However, things are moving. The survey of 1,907 professionals from the primary, secondary and tertiary sectors³ highlights that most companies consider water issues relevant for their business strategies. Many of them are also adopting ad hoc policies for this purpose and they

¹ Global Risks 2015, 10th Edition, is published by the World Economic Forum within the framework of The Global Competitiveness and Benchmarking Network.

² The Global Opportunity Report 2015 is realized by the Scandinavian think tank Monday Morning Global Institute, the Norwegian certification group DNV GL and UN Global Compact.

³ Primary: i.e. agriculture; secondary: i.e. manufacturing; tertiary: i.e. service, transportation.

probably would be driven to do even more if external pressure from customers or other stakeholders were as strong as it is for aspects like pollution or safety, etc.

In this context, a group of companies (hereinafter “leaders”) is a step ahead and already manages water issues with a forward-looking approach.⁴

⁴ Leaders’ characteristics are reported in the text boxes throughout the report and summarized in the final section “Profiling the leaders”.

METHODOLOGY AND SURVEY SAMPLE

- The survey was conducted in December 2014. It involved 1,907 professionals who work at companies in the primary, secondary and tertiary sectors across different industries in Europe, North America, Central & South America and Asia.
- The sample consists of DNV GL's customers and is not statistically representative of worldwide companies.

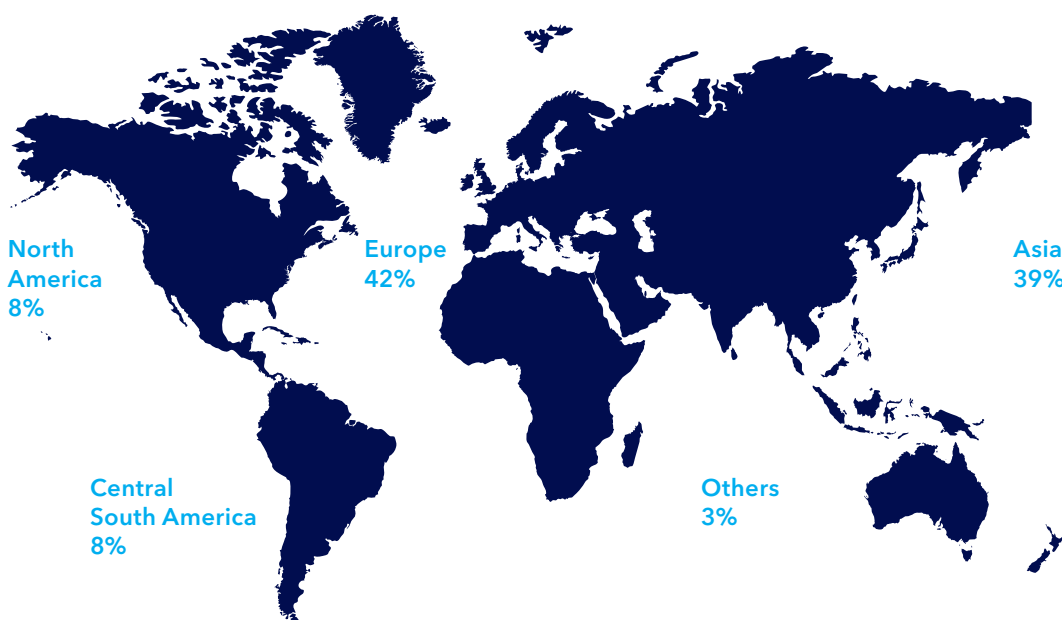


Figure 1: Companies in the sample. Geographies

- 51% of companies use water in their production process, 49% just for civil use.
- The sample includes 108 companies defined as "leaders".
 - The classification of a company in the leaders category is based on a self-assessment of maturity regarding water management.
- The questionnaire was administered using the CAWI (Computer Assisted Web Interviewing) methodology.

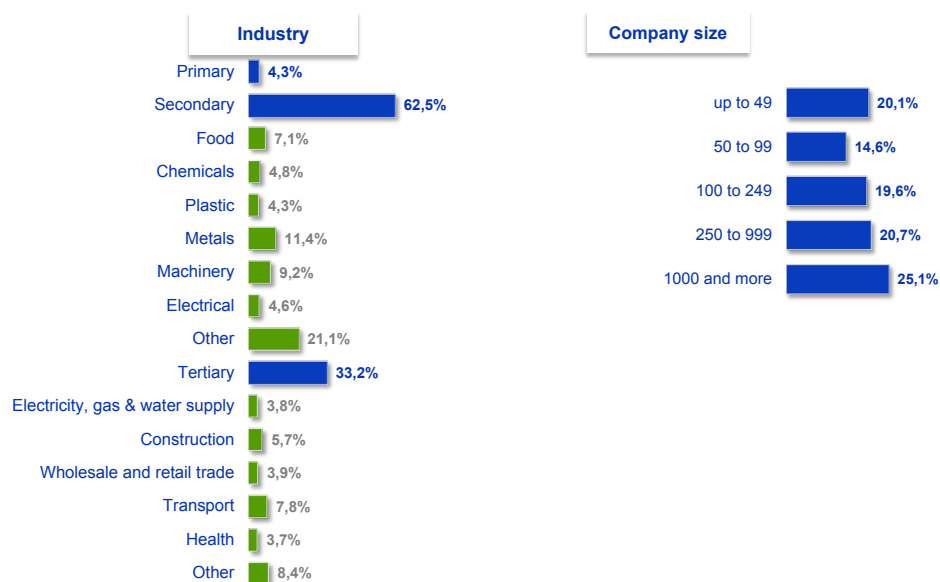


Figure 2: Companies in the sample. Industries and sizes (n° of employees)

NOTES TO THE READER

- In the graphs herein contained, orange circles highlight significantly below average data. Blue circles highlight significantly above average data.
- Graphics in figures from 1 to 9 and in figures 15 and 18 refer to single answer questions, with answers adding up to 100%. All other graphs refer to questions with multiple answers.
- All the graphs below report the scores obtained by the total of respondents, by respondents in different regions, by companies using water for productive reasons and by leaders (with exception of figures 17 and 19).
- For the reader's convenience, the word "average" has been used throughout the text to indicate the scores obtained by all respondents.

CURRENT SCENARIO

The importance of water supply and water management

From a personal and societal perspective

Water is a concern. 73% of people interviewed see water supply as an issue that impacts "their daily life". Perception is often worse when considering problems at a societal level; in effect, 83% think that water supply is a key matter "for their country".

Central and South Americans are those most worried: 88% see water supply as an issue affecting their daily life and even more, 94%, for their country, likely because - despite the abundance of hydric resources in the region - access to water and its good quality are not taken for granted.

Asians come immediately after, with percentages lower than those recorded by Latin Americans but still above average. Europeans record below average rates.

When thinking of the world as a whole, the alarm is unanimous. 95% agree that water supply is a global issue, with rates higher than 90% in all world regions (Figure 5).

To what extent do you see water supply as an issue in your daily life?

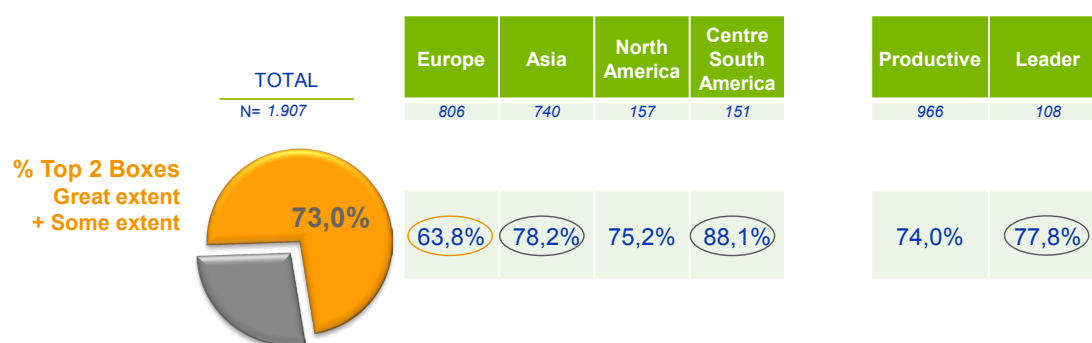


Figure 3: Water supply as an issue in daily life

To what extent do you perceive water supply as an issue to your Country?

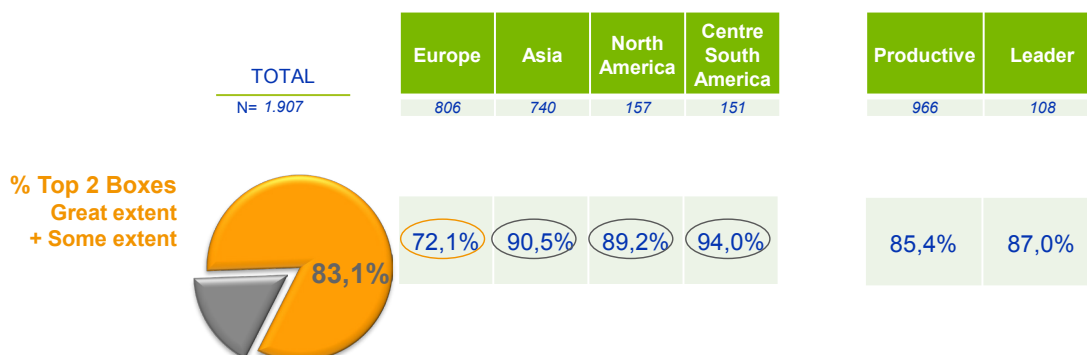


Figure 4: Water supply as an issue for one's country

To what extent do you perceive water supply as an issue to the global society?

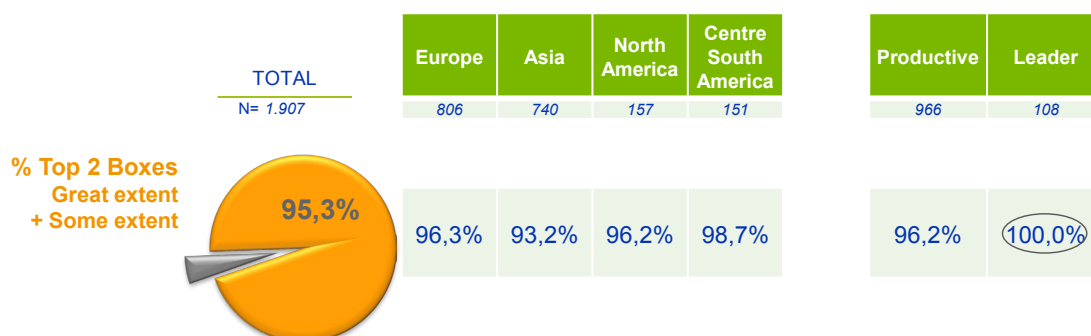


Figure 5: Water supply as a global issue

From a business perspective

Although with less impressive percentages than when considering the problem from a personal or societal point of view, water management issues seem to be a concern from a business perspective too. 70% of companies consider water management issues to be relevant for their business strategies (percentages reach 85% among firms using water in their production processes).

There are differences at the geographical level. Central and South Americans confirm their focus on the topic (89%), while for Europeans it is less of a problem (65%).

As for industry, the primary sector stands out with proportions above average (85%), while in the secondary sector food & beverage (92%) and chemical (87%) companies report the highest percentages.

93% of LEADERS consider water management issues to be relevant for their business strategies.

To what extent are water management issues relevant to your company overall business strategy?

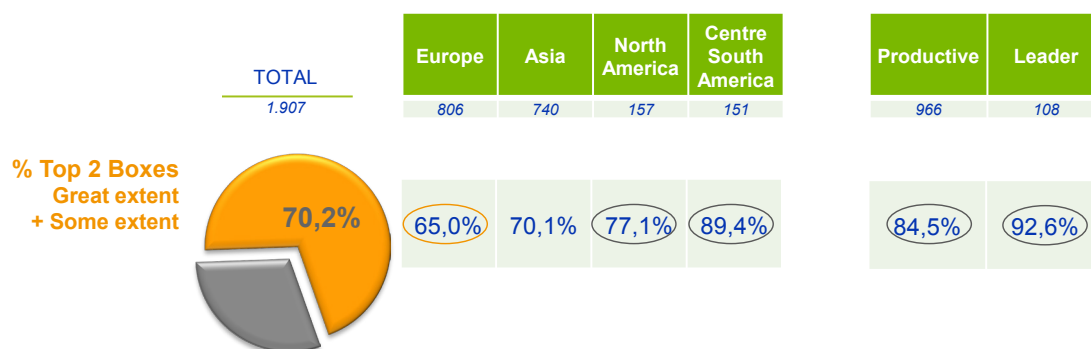


Figure 6: Relevance of water issues for business strategies

Water management

Awareness of legislation and maturity

73% of companies are aware of the legislation on water in their countries; Central and South Americans once again stand out (84%; +11% vs average).

Companies using water for production processes obviously know more about legislation (+6% vs average) than companies using water for civil uses only. Nevertheless, despite widespread concern at a general level, 1 in 5 companies using water for production purposes is not aware of the applicable legislation.

To what extent are you aware of the legislation on water in your Country?

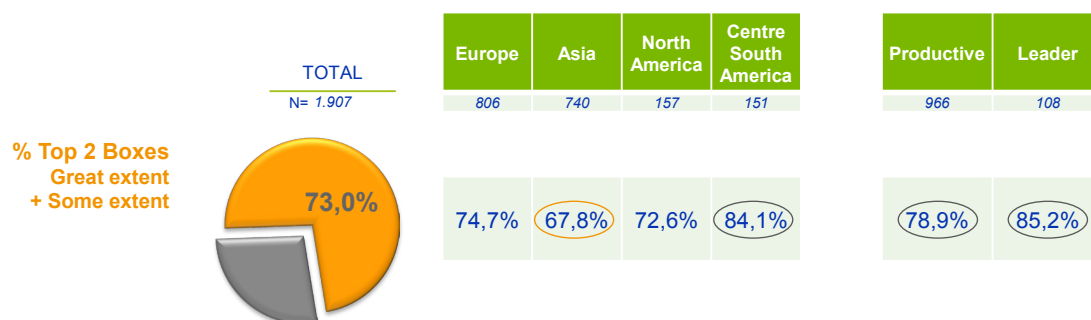


Figure 7: Awareness of legislation on water

Professionals interviewed feel that there is still a lot to do before we can turn concern into concrete commitment and responsible actions. So much so that, on a scale from 1 to 5 (from "beginner" level to "leader" level) that measures maturity in managing water, only 1 in 4 rated their companies as advanced (level 4 and 5).

The Food & beverage segment stands out with 49% of businesses rating themselves in categories 4 and 5.

LEADERS (level 5) are a minority. Only 6% of firms feel that they manage water in a mature way.

Where would you position your company on a 5 point maturity scale for water management, where 1 is Beginner and 5 is Leader?

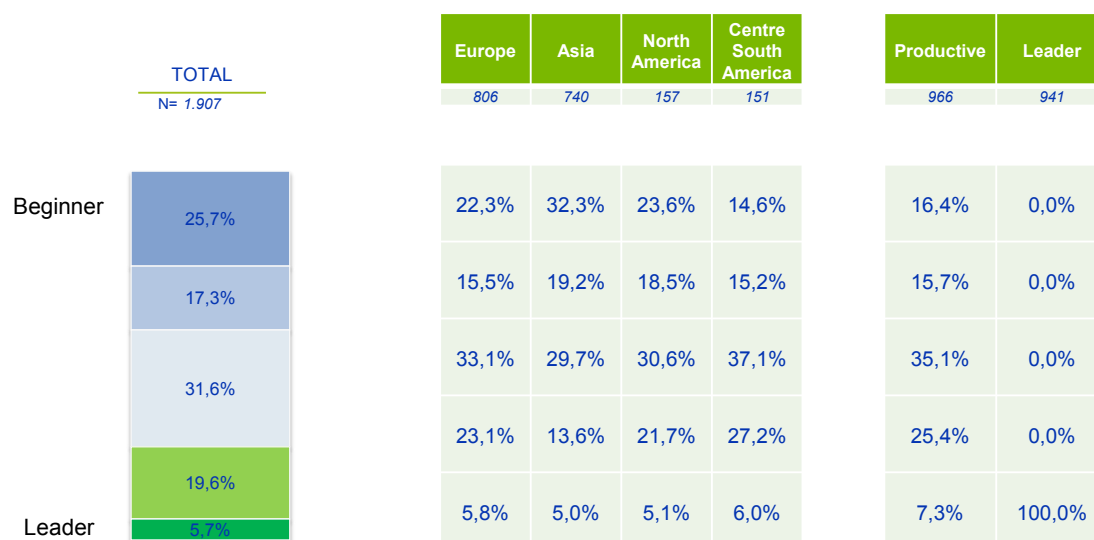


Figure 8: Maturity scale for water management

Strategies, policies and goals

However, things are moving and 34% of companies already have a water management strategy or policy; this percentage grows to 47% for businesses that use water in their production process. 36% have specific goals for water consumption, as do 1 in 2 businesses using water for industrial purposes.

Once again, companies in Central and South America are a step ahead: 42% adopt water management strategies or policies and 48% have specific goals regarding water use.

LEADERS have a structured approach: they adopt policies (83%) and set specific goals (78%).

Does your company have a water management strategy/policy?

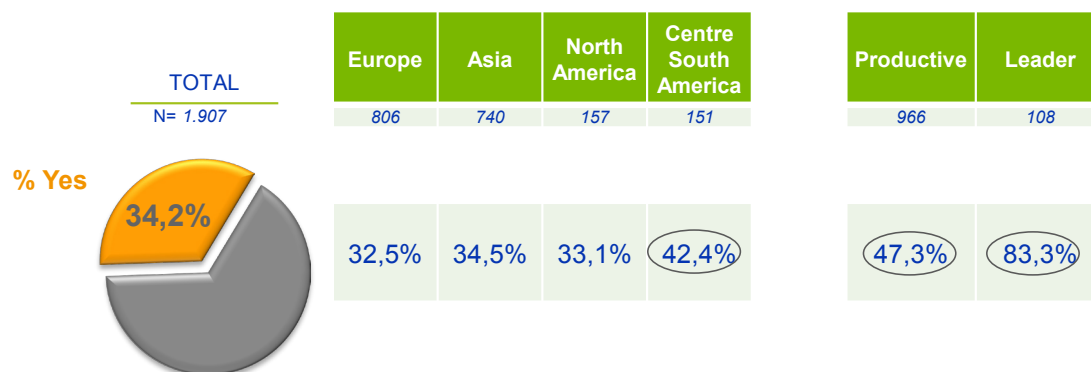


Figure 9: Adoption of strategies/policies for water management

Does your company have goals on water management?

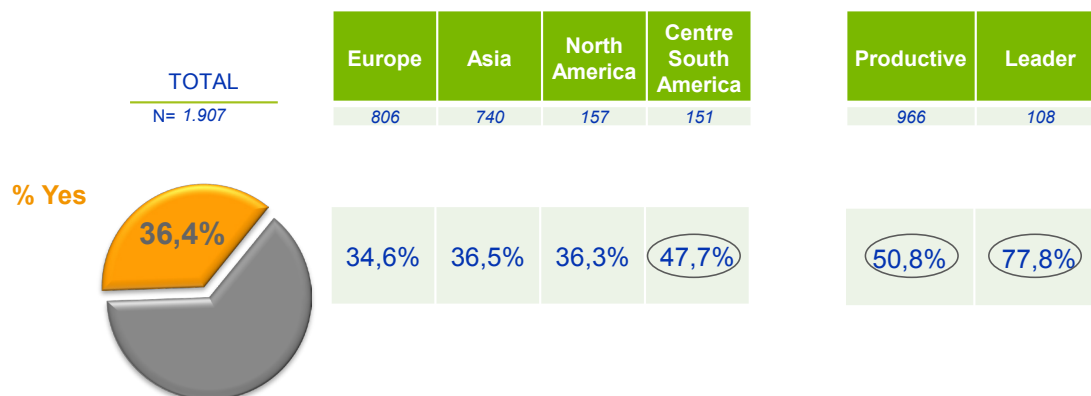


Figure 10: Goals on water management

Water management as a matter of efficiency

For world companies, water management is currently mainly a matter of efficiency and of focus on aspects with financial implications. Among companies' concerns, reduction of consumption (54%) and waste management (46%) top the list. Conservation (37%) and security (28%), that is to say the availability of an acceptable quantity and quality of water, follow. Shortage management (11%) is at the lowest position in the classification, with Europe scoring the lowest percentage (6%).

In addition to efficiency related concerns, that are much more intense than average, LEADERS care particularly for security and shortage management too.

Where is your company concern around water management?

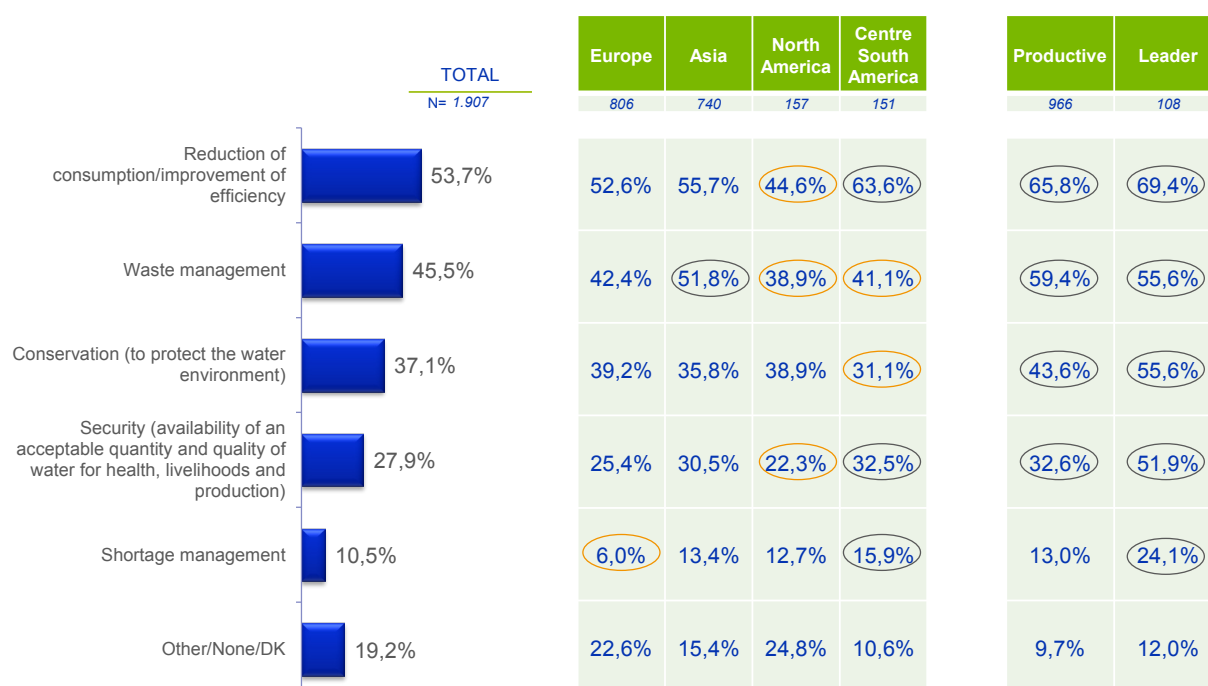


Figure 11: Companies' concern about water management

Key initiatives undertaken

44% of firms - and 61% of those using water for production - undertook water management initiatives in the last 5 years.

The actions were mainly limited to measurement. The top three initiatives are efficiency related: tracking water usage (27%), setting specific goals on water issues (22%) and investing in water efficient devices (21%). The involvement of top management is still limited, and 18% only report issues to corporate leaders. Companies are not building competences - only 13% are providing training to the staff and only 14% have defined a dedicated function responsible for

water management - nor they are adopting a proactive attitude; actually only 16% performed assessments on water management to check congruence with prefixed criterions. Only 8% disclose water management questions to stakeholders; just companies from the primary sector (13%), food & beverage (16%), and the chemical industry (16%) stand out with rates above average for this activity.

The overall approach adopted by businesses using water in their production process is similar, just with higher frequency. The same applies to Central and South Americans; they turn out to be the most active, with rates above average for almost all initiatives considered.

82% of LEADERS implemented water related initiatives. They record higher rates for all actions: for efficiency related initiatives but also for the ones that are more sophisticated.

Differently from what happens at a general level, they are particularly focussing on assessment activities (49%), establishment of dedicated functions responsible for water management (46%) and staff training (44%). They disclose water management issues to stakeholders three times more than the average.

Has your company undertaken water management initiatives in the last 5 years? Which of the following initiatives regarding water management has your company taken?



Figure 12: Water management initiatives undertaken by world companies

Main reasons for undertaking water management initiatives

Compliance with laws and regulations (29%) and economic reasons (24%) are the main drivers for companies to undertake water related initiatives. Water management initiatives do not seem to be particularly motivated by the possibility of gaining a competitive advantage and improving brand reputation (14%), nor by pressure from customers (4%) and other stakeholders (8%). Stakeholders do not push for sustainable use of water; only 10% feel the need to disclose hydric performance. Water management once again turns out to be bound to regularity and efficiency of the company's performance.

Compliance with laws and regulations (65%), internal policies (54%) and economic reasons (48%) play priority roles for LEADERS too. However, they are motivated by the intention of safeguarding company assets in a proportion well above average (34%). Moreover, requests from customers are weighed four times the average.

Has your company undertaken water management initiatives in the last 5 years?
What are the reasons that led your company to undertake water management actions?



Figure 13: Reasons driving companies to undertake water management initiatives

Main benefits

Coherently with reasons why, companies benefited especially in terms of achievement of compliance with laws and regulations (27%) and financial savings (25%). The decrease of environmental accidents was pointed out only by 17%. Central and South Americans, instead, demonstrated an accentuated awareness in this sense too and declared to have taken advantage in terms of decrease of environmental accidents in a percentage well above average (32%; +15%). They also gained competitive advantage and improved brand reputation more than others did (18%; +6%).

LEADERS profited much more than others did, especially in terms of "strategic" gains. Benefits like competitive advantage and improved relations with other stakeholders are rated much higher by them.

**Has your company undertaken water management initiatives in the last 5 years?
What benefits did your company achieve from the actions undertaken?**

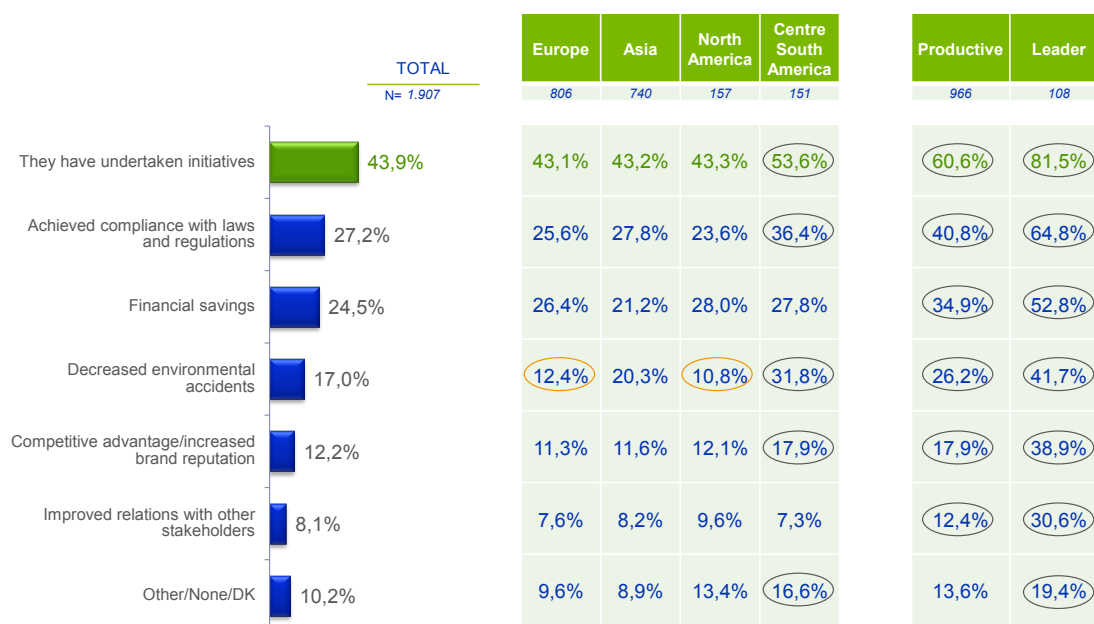


Figure 14: Benefits from water management initiatives

Main obstacles

There is not a single outstanding obstacle preventing companies from making more progress in managing water issues, but several. They fall into two categories: economic constraints and the absence of pressures and of a real awareness on the matter.

Businesses are hindered by the lack of management awareness (21%) and of consensus about what to do (15%). Among key economic difficulties, they also report the lack of financial resources (17%), no return on investment (17%) and the need to focus more on short term results (12%).

45% of LEADERS do not see any barrier to making progress in managing water issues. They seem to know what to do; lack of management awareness is a problem only for one in ten.

What factors prevented your company from making more progress in managing water issues?

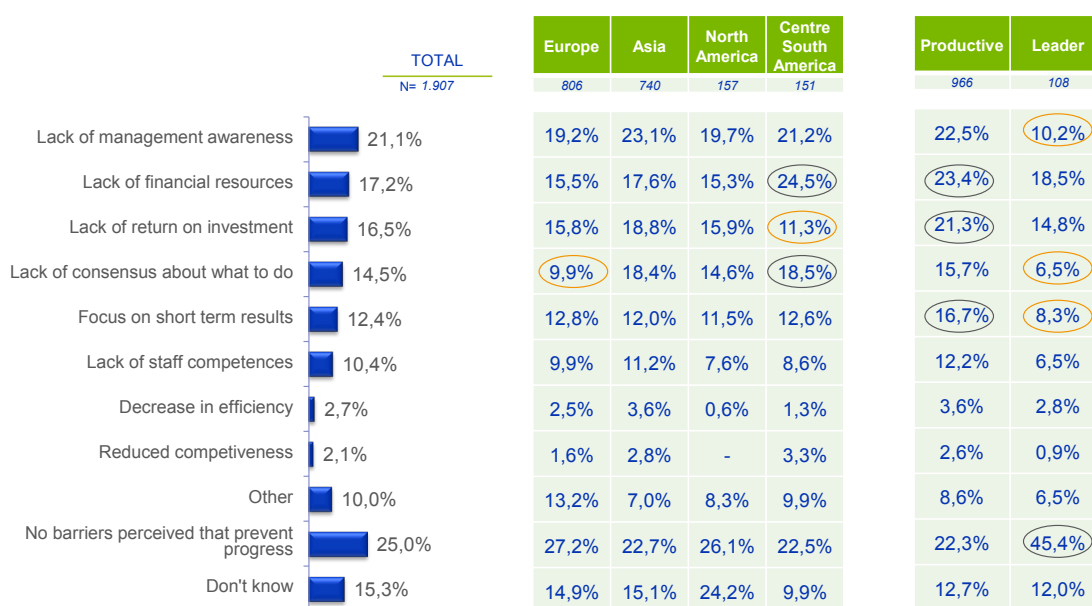


Figure 15: Obstacles to progress in managing water issues

FUTURE OUTLOOK

Performance expectations

In the future, 57% of companies assume they will reach higher positions (4 and 5) in the maturity scale measuring water management ability. The percentage grows to 86% for Latin Americans. More than one in two Europeans and North Americans expect to occupy positions 4 and 5 too.

LEADERS are aware of the importance of water management and expect to maintain their positions in the future.

Where would you like your company to be positioned on a 5 point maturity scale for water management in 5 years' time, where 1 is Beginner and 5 is Leader?

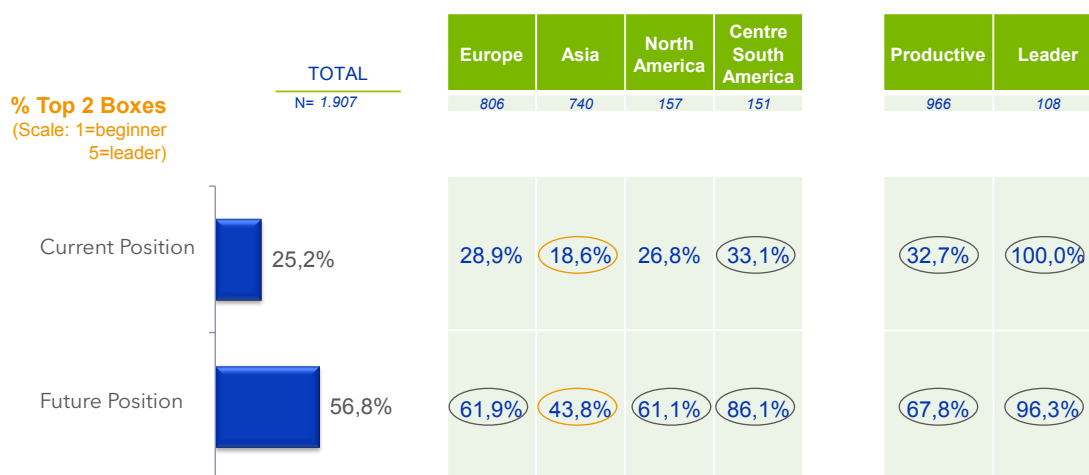


Figure 16: Performance expectations

Future drivers and initiatives

Companies claim they will intensify their commitment towards water management in the future; all initiatives record increases. Activities related to measurement and to more efficient use of water will remain the most common actions but there will be significant increases also in more sophisticated actions like staff training (1 in 3; +17% vs present), involvement of top management (1 in 4; +7% vs present) and audits (28%; +12%).

For sustainable water management, LEADERS will rely on more sophisticated actions in the future, such as auditing and training.

Which of the following initiatives around water management will your company probably take in 5 years' time?

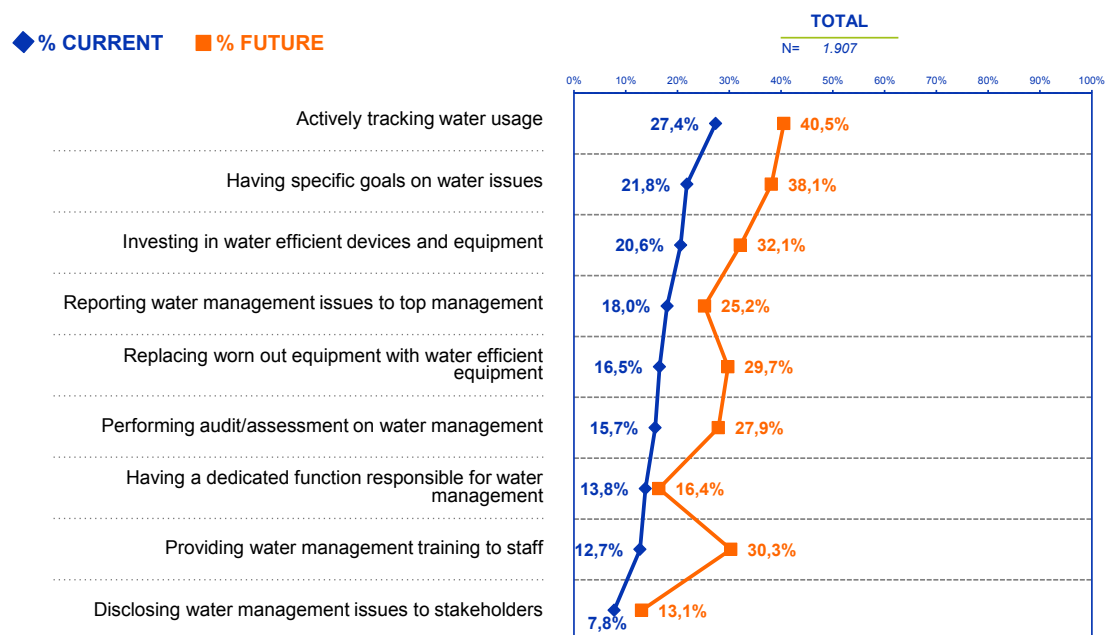


Figure17: Water management initiatives in the future vs present

To support their future engagement, 40% plan to increase investments. Central and South Americans (66%) and primary sector companies are the most determined (59%).

All LEADERS will keep investing. 1 LEADER in 2 is even planning to increase investments.

Is your company going to invest in the water management in the next 5 years?

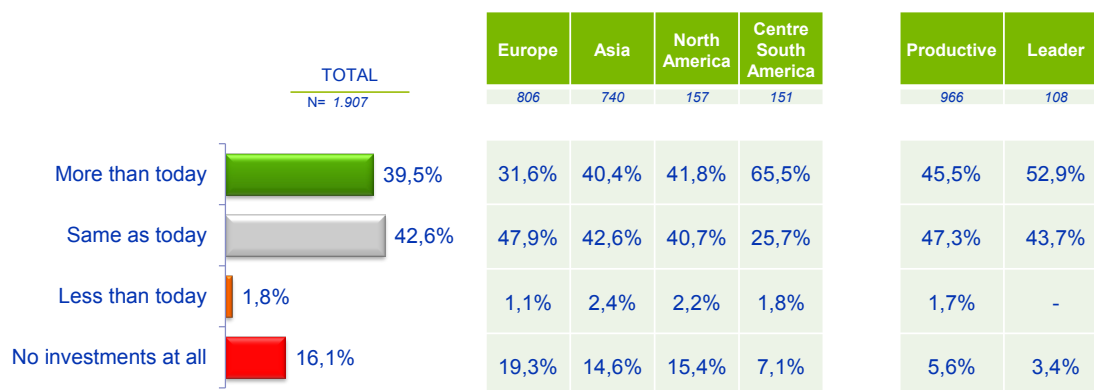


Figure 18: Future investments

Potentials bound to water management are very high. All benefits coming from hydric initiatives are expected to record double digit increases; thanks to wiser water management, companies especially expect a decrease in environmental accidents (38%; + 21% vs present) and to be able to improve their performance. In effect, financial savings (44%; + 19% vs present) and competitive advantage/brand reputation (34%; + 26%) are expected to increase markedly.

Competitive advantage is assumed to increase, especially in Europe (+27% vs present) and in North America (+23% vs present) while Asians and Central and South Americans believe they will benefit especially in terms of a decrease in environmental accidents (both +27% vs present).

**What benefits did your company achieve from the actions undertaken?
If would like to improve compared to your position today, what are the reasons for this?**

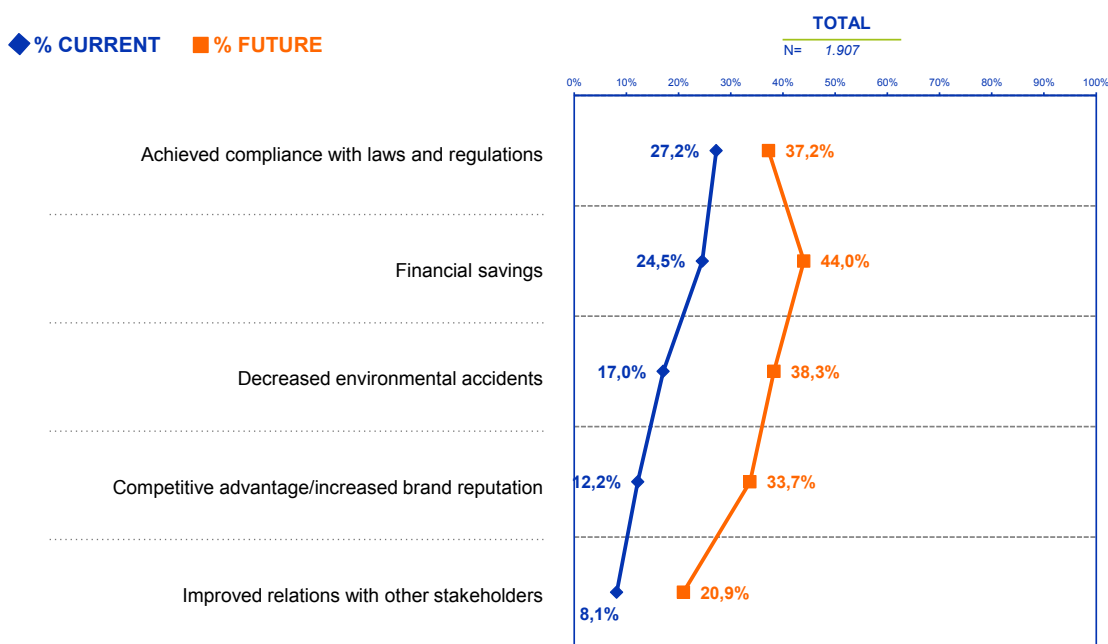


Figure 19: Expected benefits vs current benefits

In the future, LEADERS will be pushed to action especially by the possibility of gaining competitive advantage (+9%).



PROFILING THE LEADERS

Leaders record much higher percentages throughout the whole survey, revealing that they have a forward-looking approach.

Water management is a key topic for them from a business perspective; they are aware of the importance of water management to keep operating and growing.

Leaders have a structured approach: they adopt policies, set specific goals for water usage and implement a range of water related initiatives. Their efforts target efficiency of consumption but they work also in a strategic perspective. They train the staff, establish dedicated functions responsible for water management and carry out assessment activities.

The benefits they obtain are either tangible (related either to efficiency or to the possibility of gaining competitive advantage), or related to the improvement of their relation with stakeholders.

For sure, they will keep working on water management in the future and seeing in it a way to improve their company's performance.

Leaders' features

1. Water supply is a key topic for LEADERS from a business perspective.
2. LEADERS are well aware of the legislation on water in their countries.
3. LEADERS adopt water management policies
4. LEADERS set specific goals for water usage.
5. Water management is not only a matter of efficiency for LEADERS but also involves questions such as security and shortage management.
6. In addition to initiatives targeting efficiency of consumption, LEADERS establish dedicated functions responsible for water management, train the staff and carry out assessment activities. 1 in 3 even disclose water management issues to stakeholder
7. Efficiency is not the only reason motivating LEADERS to undertake water management initiatives. Safeguarding company assets and satisfying customers are significant drivers for them.
8. LEADERS profited more than others did, in terms of efficiency but especially of competitive advantage, and of improvement of relations with stakeholders.
9. LEADERS tackle obstacles better than others and know what to do: lack of awareness is less of a problem for them.
10. LEADERS will keep investing and working on water questions in the future.

OUR FINAL THOUGHTS

Demographic pressures, economic development, climate change, urbanization and pollution are all putting pressure on the world's freshwater resources. The demand for water keeps growing and is further projected to increase by 55% by 2050, due to growing demand for manufacturing, electricity generation and domestic use. More efficient use of water has never been as crucial as it is today.

However, using water in a more efficient way does not only allow to maintain a sustainable equilibrium but also to benefit from the opportunities that go with it. There are many examples. In agriculture, innovative irrigation technologies can reduce water extraction (and therefore costs) and increase crop yields. Other business opportunities come from freshwater production; thanks to new technologies and use of renewable energy new markets bound to wastewater treatment or desalination plants open up. Again, smart water regulation with pricing mechanisms encouraging efficiencies or the introduction of other initiatives such as labelling products to allow consumers to make water-efficient purchases represent further opportunities.⁵

These are only some of the many opportunities offered by more efficient use of fresh water. Each organization can take advantage of its own; they are within every firm's reach. Water management is just beginning to be approached with the same organizational attitude adopted for other business areas. For this purpose, awareness and measurement play a key role.

Basic steps to more efficient water management can be easily summed up. Each company needs to:

1. Set its own goals. They may vary from generically promoting awareness to reduction of consumption to the definition and adoption of a policy.
2. Measure its water footprint - that is to say the total volume of water used to produce goods and services - combining data about different operations (groundwater used by industry/agriculture, rainfall absorbed by crops, wastewater...)
3. Conduct an assessment in order to identify the water impact of their performance according to different parameters (per geography/plant, product, process, people, etc.)
4. Define a strategy and build a roadmap to reduction and improvement.

The diffusion of such an approach could contribute to preserving freshwater resources and to guarantee everyone's right to "physically sufficient, safe, acceptable, and affordable water for personal uses" as provided for by international human rights law.

⁵Global Risks 2015, 10th Edition, is published by the World Economic Forum within the framework of The Global Competitiveness and Benchmarking Network.

