Water Disclosure

WDP 2014

June 2014

Report compiled by

PROMETHIUM CARBON

Contents

CDP Water Disclosure 2014

Introduction

Question Pathway for the Introduction

0.1 Introduction

Please give a general description and introduction to your organization.

Gold Fields Limited is an unhedged, globally diversified producer of gold with eight operating mines in Australia, Ghana, Peru and South Africa. In February 2013, Gold Fields unbundled its mature underground Beatrix and KDC mines in South Africa into an independent and separately listed company, Sibanye Gold Limited. It also expanded its presence in Australia, acquiring the Darlot, Granny Smith and Lawlers mines (known as the 'Yilgarn South Assets') from Barrick Gold in October 2013.

Gold Fields has attributable annual gold production of approximately 2.02 million ounces, as well as attributable Mineral Reserves of around 49 million ounces and Mineral Resources of around 113 million ounces. Attributable copper Mineral Reserves total 708 million pounds and Mineral Resources 7,120 million pounds. Gold Fields has a primary listing on the JSE Limited, with secondary listings on the New York Stock Exchange ('NYSE'), NASDAQ Dubai Limited, Euronext in Brussels ('NYX') and the Swiss Exchange ('SWX').

This report does not include the performance of Sibanye Gold Limited or any of the 'Yilgarn South Assets'.

0.2 Reporting Year

Please state the start and end date of the year for which you are reporting data.

Enter Periods that will be disclosed
(01)/(01)/2013)-(31-12-2013)

0.3: Reporting boundary

Question 0.3: Please indicate the category that describes the reporting boundary for companies, entities, or groups for which water-related impacts are reported.

Companies, entities or groups over which operational control is exercised

Question 0.4: Are there any geographies, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?

No

Current

1 Context

1.1: Please rate the importance (current and future) of the water quality and water quantity to the success of your organisation.

Water quality and quantity	Importance rating	Please explain (500 characters limit)
Direct Use: sufficient amounts of good quality freshwater available for use across your own operations	**Vital for operations**	Without water Gold Fields cannot operate its mines as good quality fresh water is a vital process input for gold production and is crucial to the health of Gold Fields employees.
Direct Use: sufficient amounts of recycled, brackish and/or produced water available for use across your own operations	**Vital for operations**	Gold Fields requires good quality freshwater for its operations, workforce and for local communities. However sufficient amounts of low quality water (i.e. recycled/re-used or brackish) will allow the operations to continue and there are continual re-use and re-cycling activities that occur at all Gold Fields operations, most notably between the process plants and the tailings dams . Some low quality water does need to be treated (i.e. RO plants at South Deep that treat water from the fridge plant and from the process plant for re-use).
Indirect Use: sufficient amounts of good quality freshwater available for use across your value chain	**Vital for operations**	Several products purchased by Gold Fields' for use in the mining process (i.e. electricity, cyanide, fossil fuels) require significant amounts of freshwater to be produced. Therefore, insufficient water availability has the potential to impact on Gold Fields supply chain.
Indirect Use: sufficient amounts of recycled, brackish and/or produced water available for use across your value chain	**Have not evaluated**	Gold Fields has not evaluated whether its suppliers can make use of recycled, brackish and / or produced water in their production processes. This would need to be assessed from a technical as well as a financial perspective (i.e. is it financially feasible for the supplier to clean the recycled, brackish and/or produced water).

1.2: Have you evaluated how water quality and water quantity affects/could affect the success (viability, constraints) of your organisation's growth strategy?

Option	Please Explain (500 characters limit)
• Yes, evaluated over the next 1 year • Yes, evaluated over the next 5 years • **Yes, evaluated over the next 10 years** • Not evaluated • Other, please specify	As per section 3 of this report, water quality and quantity constraints have been identified as risks to Gold Fields with several potential impacts. Examples of potential impacts are increased operational costs, and disruption of operations.

If Yes and substantive risks are identified, please report these in section 3, Implications.

1.3: Has your organisation experienced any detrimental impacts related to water in the reporting period?

If yes:

1.3a: Please describe the detrimental impacts experienced by your organisation related to water in the reporting period

Country	Ghana
River basin	Ankobra River Basin
Impact Indicator	Other: production of concentrated brine as an unintended consequence of the construction of reverse osmosis water treatment plants at the North and South Heap Leach Facilities
Impact	Other: The water treatment plant at the North Heap Facility had to be temporarily shut down in the 3rd quarter of 2013, partly due to the recirculation of brine. Gold Fields is currently storing the brine and looking for solutions to treat or re-use the brine.
Description of Impact (500 characters limit)	Though Tarkwa's North and South Heap Leach facilities have been closed, there is still interaction between rainwater and stacked ore until full rehabilitation takes place, which results in salts being dissolved in water discharges. To manage this impact 2 reverse osmosis plants have been commissioned. A consequence of these plants is the production of brine which in 2013 impacted on the operation of the plants and needs to be stored onsite until a disposal solution has been found.
Overall financial impact (500 characters limit)	The shutdown period of the water treatment plant had no financial implications as no water needed to be discharged to the external environment during that time due to low rainfall levels.
Response Strategy (dropdown option)	Other: Engagement with research partners and an external expert
Description of response strategy (500 characters limit)	A process to reduce water discharge is currently under investigation. Reduced water discharge means that less brine is produced in the water treatment process. Gold Fields is furthermore working with an external expert and Ghana's University of Mines and Technology (UMT) to

	research how best to dispose of this concentrated brine in the future. UMT found that the brine solution seems to be suitable for the irrigation of rubber trees.

Country	Australia
River basin	Western Plateau River Basin
Impact Indicator	Other: Precipitation extreme
Impact	Other: temporary reduced productivity
Description of Impact	In 2013 Agnew experienced an event of heavy rainfall over 24 hours, which impaired transport mobility. This resulted in reduced productivity during this time.
Overall financial impact	Reduced productivity results in reduced ounces mined. However, over such a short time it is difficult to quantify the exact impact. The ounces of gold lost over 24 hours would be a small loss that could easily be replenished and would not result in a significant reduction in output or revenue.
Response Strategy	Infrastructure investment
Description of response strategy	All Gold Fields operations are in the process of implementing an updated water management plan by 2015.

Country	Peru
River basin	Tingo River Basin
Impact Indicator	Regulation of discharge quality / volumes leading to higher compliance costs
Impact	Higher operating costs
Description of Impact	In Peru, stricter water quality discharge regulations have been implemented for 2014 and 2015. In 2012 a new water treatment plant was therefore commissioned, which made the quantity of discharged water compliant with regulations. However, for compliance with the water quality standards additional treatment is necessary. For this purpose a pilot test with an RO system is being conducted, which has produced positive results thus far.
Overall financial impact	To ensure compliance with the new regulations, capital investments had to be made. Further investment may still be required. Furthermore, operating costs are increased for the running of the water treatment plants and monitoring of compliance.
Response Strategy	Increased investment in new technology
Description of response strategy	Gold Fields is currently evaluating an additional water treatment system for the tailings storage facility for Cerro Corona. This process has involved consideration of new technologies available for water treatment, including a reverse osmosis plant. Gold Fields has begun a pilot program involving ultrafiltration and reverse osmosis. Gold Fields invested U.S. $0.6 million in the pilot program during fiscal 2013, with a further expenditure of U.S. $1 million planned for fiscal 2014.

Risk assessment

2 Procedures and requirements

2.1: Please select the option that best describes your procedures with regard to assessing water risks and provide an explanation as to why this option is suitable for your organisation

Options (Drop down options)	Please explain
- **Water is integrated into a comprehensive, company-wide risk assessment process incorporating both direct operations and supply chain**	Water risks are identified for both Gold Fields direct operations and supply chain through ongoing risk assessments. In addition, operations report water supply and tariff issues via quarterly board reports.

2.2: Please state how frequently you undertake water risk assessments, what geographical scale and how far into the future you consider

Frequency	Geographical scale	Timeframe(500 characters limit)
Quarterly or more frequently	**Business Unit**	The risk management process is undertaken quarterly by the group head of risk together with each operation and region. Each operation may undertake other water risk assessment processes as required. If water related impacts are identified as significant in the water risk assessments and are expected to change over time, these risks are considered into the future. This could be done for periods of 10 years and further if relevant.

Comment: The geographical areas considered in the risk management process are those countries where Gold Fields either has an operation or a growth project. These currently consist of Peru, Ghana, South Africa, Australia, Chile and the Philippines.

2.3: Please select the methods used to assess water risks (Drop down options)

WBCSD Global Water Tool
Other: IMIU (International Mining Industry Underwriters) (yearly, as part of insurance risk assessment)

2.4: Which of the following contextual issues are always factored into your organisation's water risk assessments?

Additional supporting comment to be put in comment box:
If significant risks are identified in the processes described in this question, these would be reported by the environmental manager to the General Manager and Sustainable Development Head of the region who would report this to the Regional Executive VP as well as the Executive Vice President of Group Sustainability who form part of the Safety Health and Sustainable Development Committee which is a subcommittee of the Gold Fields Limited Board. The Group Head of risk would be included throughout the process. Any significant water risks are also reported to the Gold Fields Limited Audit Committee.

Issues	Choose option (Drop down options)	Please explain (500 characters limit)
Current water availability and quality parameters at a local level	**Relevant, included**	Water availability is addressed through short, medium and long term dynamic water balances. Engineering teams' asses security of supply on a monthly basis at an operational level, which is reported on a quarterly basis to the SH&SD Committee of the Gold Fields Limited Board. Monitoring of ground and surface water quality on and surrounding the mine lease are required as part of each mines water use licence requirements, monitoring programme or in terms of other regulatory requirements.
Current water regulatory frameworks and tariffs at a local level	**Relevant, included**	Changes in regulations and water tariffs form part of the quarterly reporting requirements of the operations to the SH&SD Committee of the Gold Fields Limited Board.
Current stakeholder conflicts concerning water resources at a local level	**Relevant, included**	All operations are required to have a grievance mechanism which addresses potential stakeholder issues. These grievance mechanisms are a method for communities to be able to lodge their grievances with the mine.
Current implications of water on your key commodities/raw materials	**Relevant, included**	This is assessed as part of Gold Fields companywide risk register. This assessment of water implications on key commodities is conducted if there are indications that this might be an issue; i.e. in water scarce areas and based on past impacts such as South African power supply disruptions due to wet coal reserves caused by excessive rainfall. The risk of water related impacts on key suppliers is assessed yearly as part of Gold Fields' Water Submission to the Carbon Disclosure Project.

Current status of ecosystems and habitats at a local level	**Relevant, included**	All operations are required to be in compliance with applicable environmental regulations. Part of this environmental compliance would consist of assessing water related risks and the potential impact on ecosystems and habitats as part of an Environmental Impact Assessments and the ISO 14001 certified environmental management systems. Water risks identified will be assessed on their potential impacts on ecosystems and local habitats.
Estimates of future changes in water availability at a local level	**Relevant, included**	The Group Water Management Guideline (2013) requires continuous risk assessments to identify water risks. Water availability on a local level is furthermore recommended to be addressed through the development of short, medium and long term dynamic water balances.
Estimates of future potential regulatory changes at a local level	**Relevant, included**	Gold Fields' operations or regions have representatives that regularly engage with Government, via associations or directly, on water issues and potential regulatory changes. Tracking of key regulatory changes is also undertaken at a Group level via a variety of tools. The feedback from these engagements is used to identify risks related to regulatory changes. As per the risk assessment requirement, appropriate risk mitigation measures should be identified.
Estimates of future potential stakeholder conflicts at a local level	**Relevant, included**	Future potential stakeholder conflicts are assessed through continuous engagement with key stakeholders (including host communities and the regulator) as well as understanding water related risks and the potential trigger points for conflict (i.e. security of supply) .
Estimates of future implications of water on your key commodities/raw materials	**Relevant, included**	This is assessed as part of Gold Fields companywide risk register. This assessment of water implications on key commodities is conducted if there are indications that this might be an issue; i.e. in water scarce areas and based on past impacts such as South African power supply disruptions due to wet coal supply caused by excessive rainfall.
Estimates of future potential changes in the	**Relevant, included**	The status of an ecosystem or a species is updated through legislation. Therefore if a particular ecosystem or habitat becomes

status of ecosystems and habitats at a local level		endangered then this will be updated in the local environmental legislation. Legal alerts regarding local environmental legislation are monitored by Gold Fields Head of compliance.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	**Relevant, included**	Interactive water balances as recommended for each operation allow for scenario (i.e. changes in rainfall patterns or groundwater recharge) analysis on whether sufficient amounts and quality of water is available at a local level.
Scenario analysis of regulatory and or tariff changes at a local level	**Relevant, included**	Future risks are identified as part of the group wide risk assessment process as well as business as usual assessments related to the purchase costs of key inputs such as water. Scenario's related to key regulatory changes and tariffs which may impact on the business are also considered at a group and regional level.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	**Relevant, included**	Future risks are identified as part of the group wide risk assessment. If future risks have the potential to significantly impact on the operations but are still uncertain, scenario analysis will be conducted. Such analysis can provide an estimated range of potential implications of the risk.
Scenario analysis of implications of water on your key commodities/raw materials	**Relevant, included**	Future risks are identified as part of the group wide risk assessment. If future risks have the potential to significantly impact on the operations but are still uncertain, scenario analysis will be conducted. Such analysis can provide an estimated range of potential implications of the risk.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	**Relevant, included**	Future risks are identified as part of the group wide risk assessment. If future risks have the potential to significantly impact on the operations but are still uncertain, scenario analysis will be conducted. Such analysis can provide an estimated range of potential implications of the risk.
Other		

2.4a: Which of the following stakeholders are always factored into your organisation's water risk assessments?

Issues	Choose option	Please explain
Customers	Not relevant, explanation provided.	Due to the nature of the gold market, Gold Fields does not engage directly with its customers and does not factor them into the company's water risk assessments.
Employees	Relevant, included.	To ensure that sufficient fresh water is available on-site and at the local communities, where employees stay, all responsible and accountable employees are engaged with and included as a stakeholder in Gold Fields' water risk assessments.
Investors	Relevant, included.	Investors, specifically Environmental, Social and Governance (ESG) investors, require proof of sound water management practices. As water management is of interest to this stakeholder, they are factored into the company's water risk assessments.
Local communities	Relevant, included.	Gold Fields recognizes that local communities form an integral part in water management practices. Even if Gold Fields appropriately plans and manages its own water requirements, the company runs a risk of losing its social license to operate if local communities are exposed to water related impacts. Therefore, local communities are factored in as a stakeholder and form part of water management practices, planning and risk assessments.
NGOs	Relevant, included.	Gold Fields engages with key NGO's on water risks and water management practices, where appropriate. For example in South Africa, Gold Fields engages on a formalized basis with the Federation for a Sustainable Environment, which has a strong focus on water issues.
Other water users at a local level	Relevant, included.	Where relevant, other water users at a local level are also incorporated in water risk assessments. Examples of other water users with whom Gold Fields engages at a local level, are farmers and communities of nearby towns. For example in South Africa communities in nearby towns such as Westonaria, Bekkersdal and Simunye are engaged with.
Regulators at a local level	Relevant, included.	Gold Fields engages with regulators at a local level to gain insight into possible future regulatory changes. Through this engagement,

		regulators at a local level are factored into water related risk assessments.
Statutory special interest groups at a local level	Relevant, included.	Relevant local statutory special interest groups are factored into Gold Fields' water risk assessments. An example is Gold Fields' active engagement with the Far West Rand Dolomitic Water Association in South Africa.
Suppliers	Relevant, included	If suppliers operate within water scarce areas then they are incorporated into the risk assessments.
Water utilities/suppliers at a local level	Relevant, included.	Water utilities and suppliers are an important stakeholder for Gold Fields due to the importance of ensuring water security. Therefore these stakeholders are factored into water related risks assessments and engagement takes place regularly. Operations are required to report quarterly on water security to the Board.
Other		

2.5: Do you require your key suppliers to report on their water use, risks and management?

No

If no:

2.5b: Please choose the option that best explains why you do not require your key suppliers to report on their water use, risks and management

Primary reason	Please explain
(Drop down options) • Judged to be unimportant • No instruction from management • **Other, please specify**	Gold Fields has as of yet not engaged with key suppliers on their water use, risks and management. However, Gold Fields has recognized the importance to do so and is therefore planning to develop a 'Guideline for supply chain climate risk management'. How to engage with suppliers on water use, risks and management of these risks will form an important part of this Guideline.

Implications

3 Water risks

3.1: Is your organisation exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure? (Drop down options)

- **Yes, direct operations and supply chain.**
- Yes, supply chain only.
- Yes, direct operations only.
- No.
- Don't know.

3.2: Please complete the table below providing information as to the number of facilities exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure. Please also provide either the proportion of cost of goods sold, global revenue or global production capacity that could be affected across your entire organisation at the river basin level.

Country (Drop down options)	**River basin** (Drop down options)	**Number of facilities within the river basin exposed to water risk**	**Reporting metric** (Drop down options)	**Proportion of chosen metric that could be affected within the river basin** (Drop down options)
South Africa	**Orange River Basin**	1	% global production	15%
Australia	**Western Plateau Basin**	2	% global production	30%

Ghana	**Ankobra River Basin**	2	% global production	39%
Peru	**Tingo River Basin**	1	% global production	16%

3.2a: Please provide details as to how your organisation defines substantive change in your business, operations, revenue or expenditure from water risk (open text max 2400 characters)

Each of Gold Fields' operations are exposed to water related risks which could potentially have a substantive impact on the company. The most important water related risks are;

- The risk of losing its 'social license to operate';
- The risk of losing its license to operate from a compliance perspective;

The establishment and maintenance of a strong social licence to operate from our host communities – and, by extension, regional and national governments – is essential for the sustainability and growth of our business. This is why we put strong, secure and transparent relationships, as well as the sustainable generation of Shared Value at the core of what we do.

Gold Fields is required to comply with regulations under its permits and licenses and any failure to do so could result in the curtailment or halting of production at the affected locations. Any failure on Gold Fields' part to achieve or maintain compliance with the requirements of its water use licenses with respect to any of its operations could result in Gold Fields being subject to substantial claims, penalties, fees and expenses; significant delays in operations; or the loss of the relevant water use license, which could curtail or halt production at the affected operation. Any of the above could have a material adverse effect on Gold Fields' business, operating results and financial condition.

Apart from the above described risks, Gold Fields' South African and Australian operations are situated in water stressed areas, as per the WBCSD Tool. Though the South African operation is situated in a water stressed area, the mine currently has a positive water balance. This is mainly due to the fact that groundwater needs to be extracted to allow for the mining to take place at South Deep mine. The Australian operations mainly have difficulty obtaining good quality freshwater, as the naturally available water is hypersaline. This water needs to be treated before it can be used in mine processes, which increases operational costs. Though currently not experienced, the risk of reduced water availability has the potential to disrupt operations if an actual shortage is experienced. Climate change is also expected to exaggerate this risk of increased drought occurrence or extreme precipitation. The risk of operational disruption may have a substantive impact on the company's revenue.

3.2b Please list the inherent water risks that could generate a substantive change in your business, operations, revenue or expenditure, the potential impact to your direct operations and the strategies to mitigate them

Country	South Africa
River Basin	Orange River Basin
Risk driver (drop down option)	Physical: flooding
Potential impact (drop down option)	Closure of operations
Description of impact (500 characters limit)	There are several potential impacts resulting from the flooding of mines: • Safety risk to mine workers • Overflow of water at the mining operations may lead to unplanned discharges.
Timeframe (drop down option)	Unknown
Likelihood (drop down option)	Unlikely
Magnitude of potential financial impact (drop down option)	Medium
Response strategy (drop down option)	Increased Capital expenditure
Details of Strategy (2000 characters limit)	The risk of mine flooding is being managed in several ways: - Through water pumping, to separate mine water from fissure water. - Fixed generators (7 X 1.5 MW) are available for emergency pumping - Water treatment (2 new reverse osmosis plants were commissioned at South Deep in early 2014) reduces the total amount of water in the mine's overall system and therefore the risk of overflows. - A storm water management plan will be implemented during 2014 for the South Deep operation in South Africa.
Cost of response strategy (drop down option)	Medium

Country	South Africa
River Basin	Orange River Basin
Risk driver (drop down option)	Other: Lack of an effective operational and mine closure strategy.

Potential impact (drop down option)	Other: Pollution of water
Description of impact (500 characters limit)	Gold Fields has identified incidences of Acid Mine Drainage (AMD), and the risk of potential AMD issues, at its South Deep mine. A lack of an effective operational and mine closure strategy and measures could potentially cause decanting of acid mine water, which could have negative ecological impacts, regional impacts on major river systems and other water sources and negative impacts for surrounding communities. This could result in financial and reputational liabilities. **Include in comment box:** AMD is also present, at currently immaterial levels, at the Tarkwa, Damang and St Ives mines.
Timeframe (drop down option)	Current
Likelihood (drop down option)	Unlikely
Magnitude of potential financial impact (drop down option)	Medium-High
Response strategy (drop down option)	Other: Mine Closure Planning
Details of Strategy (2000 characters limit)	The risk of AMD is managed in several ways at South Deep: - Technical studies were implemented to identify the steps required to prevent or mitigate AMD at facilities. - Gold Fields has put in place a monitoring programme to ensure compliance with its water use license. Monitoring is on the volume as well as quality of water that is released into the natural environment. - The Liquid Gold project seeks to enhance Gold Fields' water management strategy for South Deep through water treatment, enhanced water management practices and actions to reduce water-related risks. 2 Reverse Osmosis plants were commissioned at South Deep beginning of 2014. These water treatment plants (which treat process water to a potable standard) reduce the total amount of water in the mine's overall system and therefore the risk of overflows. - South Deep mine has conducted various studies, which have focused primarily on the sources of AMD. These have been found to be primarily the waste rock dumps and tailings storage facilities. As a result of these studies, waste rock from the South Shaft has been removed and the waste rock footprint is earmarked for rehabilitation. Another study focused on understanding potential pollution plumes from the old TSF's and their impact on groundwater. This study, as well as the investigation of appropriate mitigation measures is still ongoing. - South Deep is also making use of seepage interception drains at the TSFs to intercept the shallow groundwater plumes and pump water back to the return dams to reuse in the process plant. - Active participation in the Far West Rand Dolomitic Water Association, as well as other national and international relevant water groups. Internationally, Gold Fields is represented on the International Council of Mining and Metals (ICMM) 'water working group', which is in the process of developing a strategic framework for water stewardship in the mining and metal sector.

Cost of response strategy (drop down option)	Medium

Country	Peru
River Basin	Tingo River Basin
Risk driver (drop down option)	Other: Lack of an effective operational and mine closure strategy.
Potential impact (drop down option)	Other: Pollution of water
Description of impact (500 characters limit)	Gold Fields has identified incidences of Acid Mine Drainage (AMD), and the risk of potential AMD issues, at its Cerro Corona mine. A lack of an effective operational and mine closure strategy and measures could potentially cause decanting of acid mine water, which could have negative ecological impacts, regional impacts on major river systems and other water sources and negative impacts for surrounding communities. This could result in financial and reputational liabilities.
Timeframe (drop down option)	Current
Likelihood (drop down option)	Unlikely
Magnitude of potential financial impact (drop down option)	Medium-High
Response strategy (drop down option)	Other: Mine Closure Planning
Details of Strategy (2000 characters limit)	The risk of AMD is managed in several ways at Cerro Corona: - Gold Fields has commissioned several technical studies to identify the steps required to prevent or mitigate AMD at its facilities, but none of these studies have allowed Gold Fields to generate a reliable estimate of the potential impact of AMD on the Company. - Cerro Corona's tailings and waste rock facilities were designed to avoid and mitigate the risks of AMD. Gold Fields also conducts acid base accounting to obtain a more detailed understanding of where the key potential AMD risks are located, thereby better informing appropriate short- and long-term mitigation strategies at Cerro Corona. - A water management strategy and plan will be implemented at Cerro Corona by the end of 2015.
Cost of response strategy (drop down option)	Medium

Country	South Africa/ Peru/ Ghana/ Australia
River Basin	Orange River Basin/ Tingo River Basin/ Ankobra River Basin / Western Plateau Basin

Risk driver (drop down option)	Physical: Other – tailing dam stability
Potential impact (drop down option)	Other: Environmental and infrastructure damage
Description of impact (500 characters limit)	In the case of extreme weather events, tailing dams could be at increased risk of overtopping and instability. This is a generic risk, in principle existing at every operation, though depending on the severity of extreme weather events in the different regions, as well as the position of tailing dams, certain operations are at higher risk than others.
Timeframe (drop down option)	Unknown
Likelihood (drop down option)	Unlikely
Magnitude of potential financial impact (drop down option)	High
Response strategy (drop down option)	Other: best practice management, monitoring and external audit of tailing dams
Details of Strategy (2000 characters limit)	Gold Fields tailing facilities are designed in accordance with best practice standards and regularly reviewed based on management practices and physical characteristics. In 2012, Gold Fields commissioned an external expert review of all its 'live Tailings Storage Facilities'. The audit found that all TSFs are generally stable, the management of freeboard strong and that permits are in place and complied with. Recommendations for improvements were also provided, which were implemented in 2013. Gold Fields appointed an independent review board, consisting of international tailings dam experts, to monitor the tailings dam at Cerro Corona. This board meets four times per year and reviews construction of the dam wall, filling procedures, stability, water management and conducts site visits to investigate whether the tailings dam is hydrologically contained. The tailing dam at Cerro Corona has been designed to withstand seismic events.
Cost of response strategy (drop down option)	Medium

Country	South Africa
River Basin	Orange River Basin
Risk driver (drop down option)	Physical: Increased water stress
Potential impact (drop down option)	Higher operating costs/production disruption
Description of impact (500 characters limit)	Gold Fields' South African operation is situated in an area which experiences medium water stress. South Deep mine has a positive water balance and therefore it is unlikely that the mine will directly experience water stress. However, South Deep's supply of purchased water as well as products manufactured in the region which require water in the production process could be impacted if water stress increased. This could increase operating costs and in the worst case disrupt production.

Timeframe (drop down option)	Unknown
Likelihood (drop down option)	Unknown
Magnitude of potential financial impact (drop down option)	Low-medium
Response strategy (drop down option)	Other: water management
Details of Strategy (2000 characters limit)	This risk is managed through increased water efficiency and reduced dependency on external water supply. Due to enhanced water management practices, water consumption was reduced with approximately 400 Ml in 2013 at South Deep mine. As part of the Liquid Gold Project, two Reverse Osmosis (RO) plants were commissioned at South Deep at the beginning of 2014. These two plants treat process water to a potable standard and have reduced South Deep's purchase of potable water from the Rand Water Board from 250,000 kl/month to 160,000 kl/month. Engagement with suppliers to obtain insight into water related risks for the supply chain will be initiated in 2014.
Cost of response strategy (drop down option)	medium

Country	Peru
River Basin	Tingo River Basin
Risk driver (drop down option)	Reputational: Community Opposition
Potential impact (drop down option)	Closure of operations
Description of impact (500 characters limit)	Maintaining its 'social license to operate' is of utmost importance to Gold Fields. A failure to manage community relationships can result in the loss of community acceptance and the companies' social licence to operate. The reality of losing its social license to operate can be illustrated through other Gold Mining companies in the region, which were disrupted due to community dissatisfaction.
Timeframe (drop down option)	Unknown
Likelihood (drop down option)	Unlikely
Magnitude of potential financial impact (drop down option)	high
Response strategy (drop down option)	Comply with local legal requirements or company own internal standards, whichever is more stringent.
Details of Strategy (2000 characters limit)	The first and most important way in which Gold Fields is managing this risk is through responsible, transparent and sustainable management of its operations, and open, honest and frequent engagement with stakeholders. Water management which is in compliance with legal requirements and which shows water stewardship as an integral part of sustainable management of its

	operations. Gold Fields defines water stewardship as "*the use of water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site and catchment-based actions*" as per The Alliance for Water Stewardship (March 2013). The following water related activities are focused on strengthening Gold Fields' 'social license to operate: - Through its 'Shared Value' programme, Gold Fields aims at creating positive social impacts for local communities. One example of a project run as a 'shared value' project is a multilateral water management project in Cerro Corona. - At Cerro Corona, Gold Fields engages with local communities and formally involves them in the water quality monitoring programme. - Improvement of the existing municipal water system of Hualgayoc.
Cost of response strategy (drop down option)	Medium

Country	Australia
River Basin	Western Plateau Basin
Risk driver (drop down option)	Physical: Increased water stress or scarcity
Potential impact (drop down option)	Closure of operations
Description of impact (500 characters limit)	Gold Fields' Australian operations are situated in water stressed areas. Water shortages might potentially disrupt production capacity. Apart from that, it might disrupt supply of purchased water and / or supply of raw materials produced in the region which require water in the production process. It is likely that the first potential impact would be increased operational costs (as products may need to be sourced from other suppliers).
Timeframe (drop down option)	1-5 years
Likelihood (drop down option)	Unlikely
Magnitude of potential financial impact (drop down option)	Medium
Response strategy (drop down option)	Other: updating water management strategy and water resource diversification
Details of Strategy (2000 characters limit)	As reported the previous years, the Australian operations focused on diversification of water resources to manage the above described risk. With the acquisition of the Yilgarn South Assets, access to additional water resources has been obtained and water diversification has subsequently become less urgent. Apart from water diversification, good water management practices with a focus on water use reduction and increased recycling has been of importance. Additionally, in 2013, the water balances

	for Agnew and St Ives were updated. As part of the integration of the Yilgarn South Assets, new water strategies and management plans, in accordance with the Group Water Management Guideline, will be developed.
Cost of response strategy (drop down option)	low

Country	Australia
River Basin	Western Plateau Basin
Risk driver (drop down option)	Physical: flooding
Potential impact (drop down option)	Other: reduced production
Description of impact (500 characters limit)	There are several potential impacts resulting from the flooding of mines: • Contamination of ground water sources (i.e. process water overflow). • Inability to move mined material • Safety risk to mine workers In 2013, heavy rainfall was experienced at Agnew which slowed mobility. Long term heavy rainfall could potentially cause flooding which could result in disruption of production.
Timeframe (drop down option)	Current
Likelihood (drop down option)	Probable (inability to move mined material) Unlikely (contamination of ground water sources and safety risk to mine workers)
Magnitude of potential financial impact (drop down option)	Low
Response strategy (drop down option)	Other: increased focus on water management
Details of Strategy (2000 characters limit)	An updated water management strategy and plan is to be implemented in 2015 at all (including the new Yilgarn Assets) Australian operations. These new strategies and plans should be in line with the Group Water Management Guideline which is based on good practice, such as the United Nations Global Compact (UNGC) and the International Council on Mining and Metals (ICMM) Principles. Apart from that, the Australian operations updated their water balances in 2013.
Cost of response strategy (drop down option)	Low-Medium

Comment: over the previous years Gold Fields reported on the risk of a salt-bearing plume beneath one of its Tailings Storage Facilities at Agnew mine with the potential risk of reducing groundwater quality. A geophysical assessment has been conducted and found that the plume is not as significant as originally assumed and does not present any risk to local groundwater. As a result, Gold Fields Australia is seeking to have the plume removed from the environmental regulator's register. For this reason this risk will also no longer be reported on in the CDP Water Submission.

Country	Ghana
River Basin	Ankobra River Basin
Risk driver (drop down option)	Physical: Increased water stress or scarcity
Potential impact (drop down option)	Other: reduced production
Description of impact (500 characters limit)	During the dry season, water shortages have in the past been experienced at the Ghanaian operations. If water shortages are experienced over longer periods of time, this could cause disruption of operations.
Timeframe (drop down option)	Current
Likelihood (drop down option)	Probably
Magnitude of potential financial impact (drop down option)	Low
Response strategy (drop down option)	Other: improved water management practices
Details of Strategy (2000 characters limit)	This risk can be managed through improved insight into the on-site water situation by modelling of the mines' water balances. In 2013, the water balances for Damang and Tarkwa were finalized. The software used for the modelling of the water balances is interactive and can easily be updated to account for seasonal and even daily changes. The water balances give insight into the water situation on the mine. Practices such as increased water storage, recycling and improved water efficiency allow for management of water risks (such as flooding and water scarcity) as informed by the water balance and strategy.
Cost of response strategy (drop down option)	low

Country	Ghana
River Basin	Ankobra River Basin
Risk driver (drop down option)	Physical: flooding
Potential impact (drop down option)	Other: production disruption

Description of impact (500 characters limit)	During the rainy season, flash floods may occur at the Ghanaian operations. These flash floods have in the past caused pit flooding which has resulted in stoppages. Potentially longer disruptions could occur. As the Ghanaian mines are open-pit mines, some of the potential impacts as described for the South African and Australian operations (underground or a combination of open-pit and underground mines), such as safety risk to mine workers and contamination of ground water sources, are less likely to occur.
Timeframe (drop down option)	Current
Likelihood (drop down option)	Probable
Magnitude of potential financial impact (drop down option)	Low-Medium
Response strategy (drop down option)	Infrastructure investment (water management systems and pumping capacity)
Details of Strategy (2000 characters limit)	This risk is managed through the implementation of increased pumping capacity at the pits, as well as an improved water management system to be implemented by 2015. In 2010 and 2011, disruptions were experienced due to pit flooding. In 2012 and 2013, no pit flooding occurred, which has been attributed to the increased pumping capacity installed during 2010 and 2011, as well as the implementation of a water runoff control system.
Cost of response strategy (drop down option)	Low

Country	Other: Global
River Basin	N/A
Risk driver (drop down option)	Regulatory: increased difficulty in obtaining operation permit
Potential impact (drop down option)	Higher operating costs
Description of impact (500 characters limit)	Conditions to renew or obtain water use licenses have become stricter at all operations. Stricter license conditions are expected to increase the water cost for the company. Firstly, the additional water treatment or consumption reduction practices may increase operational costs.
Timeframe (drop down option)	6-10 years
Likelihood (drop down option)	Other: possible
Magnitude of potential financial impact (drop down option)	High
Response strategy (drop down option)	Engagement with public policy makers

Details of Strategy (2000 characters limit)	By striving to comply with all applicable regulations, supporting host communities with safe access to water (as is done in Ghana and Peru) and demonstrating its commitment to be a good water steward.
Cost of response strategy (drop down option)	medium

Country	Other: Global
River Basin	N/A
Risk driver (drop down option)	Physical: Climate Change
Potential impact (drop down option)	Other: unknown
Description of impact (500 characters limit)	Climate change has been proven to increase variability in weather systems. Therefore, the modelling and predicting of weather patterns has become more difficult and less reliable. Gold Fields is therefore aware that, though it has contracted risk consultants to investigate the expected changes in weather patterns, there is a chance that not all risks will be identified. Unknown climate change risks present management challenges.
Timeframe (drop down option)	current
Likelihood (drop down option)	Unknown
Magnitude of potential financial impact (drop down option)	Unknown
Response strategy (drop down option)	Greater due diligence
Details of Strategy (2000 characters limit)	This risk is reported as part of Gold Fields Carbon Disclosure submission to the CDP. In 2013, Gold Fields developed a “Group Energy and Carbon Management Guideline.” A requirement of this guideline is for each of the regions to conduct energy, carbon, and climate change related risk and opportunity assessments. These assessments form part of the development of regional “Integrated Energy and Carbon Management Strategies” (IECMS) and “Integrated Energy and Carbon Plans” (IECMP).
Cost of response strategy (drop down option)	low

3.2c: Please list the inherent water risks that could generate a substantive change in your business operations, revenue, or expenditure, the potential impact to your supply chain and the strategies to mitigate them

Country	South Africa
River Basin	Orange River Basin
Risk driver (drop down option)	Physical: increased water stress
Potential impact (drop down option)	Higher operating costs
Description of impact (500 characters limit)	Increased water stress is expected to be experienced most severely in regions which are already classified as water stressed. The following products are currently obtained from water stressed regions and are water intensive to produce: - Municipal Water - Electricity - Diesel - Cyanide Increased water stress in these regions could cause a disruption of production and therefore a disruption of supply to Gold Fields. This could possibly increase operational costs as products may have to be sourced from other suppliers for a premium.
Timeframe (drop down option)	1-5 years
Likelihood (drop down option)	Other: possible
Magnitude of potential financial impact (drop down option)	Low-medium
Response strategy (drop down option)	Other: reduced reliability on products (water) and supplier diversification
Details of Strategy (2000 characters limit)	Dependency on municipal water in South Africa is decreased through the Liquid Gold Project. As part of this project two Reverse Osmosis plants have been commissioned at South Deep at the beginning of 2014. These two plants treat process water to a potable standard and have reduced South Deep's purchase of potable water from the Rand Water Board from 250,000 kl/month to 160,000 kl/month. A disruption of supply of any of the other products is best managed through diversified supply and availability of other suppliers. Gold Fields aims at rolling out a supplier engagement method across the regions, which will cover water related risks. Therefore, Gold Fields is planning to develop a 'Guideline for supply chain climate risk management' which can be used by all the regions.
Cost of response strategy (drop down option)	Low-medium

Country	Ghana
River Basin	Volta River Basin
Risk driver (drop down option)	Physical: increased water stress or scarcity
Potential impact (drop down option)	Higher operating costs
Description of impact (500 characters limit)	In 2009, power supply at the Ghanaian operations was disrupted due to a drought which reduced hydropower production. This initially caused a disruption with associated loss of income. Later, diesel generators were installed, which increased operational costs (from on average US$0.17/kWh to US$0.42/kWh in 2012), but allowed for continued operation.
Timeframe (drop down option)	Current
Likelihood (drop down option)	Probable
Magnitude of potential financial impact (drop down option)	Medium-high
Response strategy (drop down option)	Increased capital expenditure (initially; the diesel generators), Supplier diversification (2013: supply agreement with Genser).
Details of Strategy (2000 characters limit)	In response to this electricity disruption of the hydro based grid, back up diesel generators were installed in 2009. As reported previously, Gold Fields has spent considerable effort and resources into investigating the potential of a biomass fired power plant at Tarkwa. Gold Fields evaluated different bio-energy technology options, but the biomass fired power plant was found not to be commercially viable. Gold Fields has signed a power purchasing agreement for power generated from a clean coal (Integrated Gasification Combined Cycle) power plant to be constructed and owned by Genser Energy. This plant can also use natural gas as a fuel if this becomes available. During the first two years of operation, Genser will supply 26 MW of power; representing 55% of Gold Fields' total electricity demand in Ghana. Though the biomass plant at Tarkwa is no longer a viable option, the development of renewable energy projects is still a strategic commitment by the company.
Cost of response strategy (drop down option)	Medium

Country	Global
River Basin	N/A
Risk driver (drop down option)	Regulatory: higher water prices
Potential impact (drop down option)	Higher operating costs
Description of impact (500 characters limit)	Water is increasingly recognized as a valuable commodity, partly caused by increased water stress experienced worldwide. Water prices have increased significantly over the past few years and are expected to continue increasing. Higher water prices

	for Gold Fields' suppliers are expected to cause increased product prices, which will increase (if passed through) Gold Fields' operational costs.
Timeframe (drop down option)	Current
Likelihood (drop down option)	Highly probable
Magnitude of potential financial impact (drop down option)	Medium
Response strategy (drop down option)	Other: setting an example in good water management practices (water stewardship)
Details of Strategy (2000 characters limit)	By encouraging good water management practices, by setting an example, Gold Fields aims to decrease the impact of increased water prices on its suppliers and its product prices. Furthermore once supplier engagement on water has commenced Gold Fields might diversify suppliers at risk in the future.
Cost of response strategy (drop down option)	Low

4 Water opportunities

4.1: Does water present strategic, operational or market opportunities that substantively benefit/have the potential to benefit your organisation?

If yes:

4.1a: Please describe the opportunities water presents to your organisation and your strategies to realise them.

Country or region	Company wide
Opportunity (drop down option)	Other: Reduced mine closure liability due to good water management practices
Strategy to realise opportunity (500 characters limit)	Good water management practices are expected to reduce mine closure liability in general. Gold Fields' Group Water Management Guideline (developed in 2013) which aims at pursuing zero harm through sound water management practices , as well as creating shared value and leaving an enduring, positive legacy, requires to be applied to each of the stages of the mining life-cycles, of which the last two are closure and post-closure.
Estimated timeframe (drop down option)	> 6 years
Comment (500 characters limit)	Gold Fields has identified good water management practices as an opportunity to reduce its mine closure liability. Therefore it has developed the Group Water Management Guideline based on good practice, such as the United Nations Global Compact and the International Council on Mining and Metals Principles. All the operations are required to develop a water strategy and water management plan in accordance with this guideline.

Country or region	Company wide
Opportunity (drop down option)	Cost savings
Strategy to realise opportunity (500 characters limit)	Reduced water usage will reduce Gold Fields' operational costs. The strategy to realise this opportunity begins with the highest level of strategic guidance, namely the Group Water Management Guideline. At an operational level, this strategic guidance is translated into mine specific plans and strategies. Any water efficiency and water recycling project, as well as on-site water treatment projects are part of the strategy to reduce water use / purchases and save costs (where operationally appropriate).
Estimated timeframe (drop down option)	Current – up to 1 year
Comment (500 characters limit)	Examples of such projects – leading to cost reductions – implemented by Gold Fields are the following: - Implementation of 2 Reverse Osmosis plants which treat process water to a potable standard at South Deep; - The multi-stage trail project at St Ives to reduce fresh water consumption. As part of the first phase of the project a mechanical seal will be installed, replacing the current gland water seals, on one of the mill area pumps. The second phase of the project is to undertake a cost benefit analysis of changing to process water, entirely replacing the need for fresh water at the seal.

Country or region	Company wide
Opportunity (drop down option)	Increased brand value
Strategy to realise opportunity (500 characters limit)	Gold Fields believes that through proving leadership in water management practices, it can improve its reputation and increase its brand value. The strategy to realise this opportunity is firstly through the implementation of companywide good water management practices. For this reason, the Group Water Management Guideline was developed. Secondly, Gold Fields is actively participating in the development of better water management practices. Its participation in the Water Reuse Research funded project, as well as the catchment based water stewardship programme with ICMM are examples of this.
Estimated timeframe (drop down option)	Current
Comment (500 characters limit)	Gold Fields corporate sustainability team formed part of a group of companies that won a grant from the Water Reuse Research Foundation. The grant will be used by the group of companies for a project entitled "Drivers, Successes, Challenges and Opportunities for Onsite Industrial Water Reuse: a Path Forward for Collaboration and Growth". The goal of this project is to bring together key players from a wide variety of industrial sectors in order to understand current industry water reuse/recycling practices, assess opportunities for expansion of such practices, explore roadblocks and drivers relative to their implementation, and summarise gaps relative to knowledge, tools, and technologies.

Country or region	Company wide
Opportunity (drop down option)	Other: Creation of Shared Value
Strategy to realise opportunity (500 characters limit)	Achieving shared value with its surrounding communities, society and host Governments is of utmost importance to Gold Fields as this is believed to strengthen Gold Fields' "social license to operate." The concept of shared value primarily focuses on implementing mine-level projects and practices that help drive the value of Gold Fields, while creating economic and social value for the surrounding communities. This is in addition to Socio-Economic Development spending.
Estimated timeframe (drop down option)	Current – 1 year
Comment (500 characters limit)	One of the shared value projects that Gold Fields is currently undertaking is a multilateral water management project in Cerro Corona. As part of its Socio-Economic Development (SED) programme, Gold Fields has spent approximately US$4 Million on providing rural communities surrounding its Cerro Corona operation with potable water and water infrastructure. Its shared value and SED projects are developed to improve the livelihoods of local communities and build strong relationships of trust.

Country or region	Company wide
Opportunity (drop down option)	Other: Water being major driver for climate change awareness
Strategy to realise opportunity (500 characters limit)	Climate change related water events have been found to increase awareness of climate change. Gold Fields is managing climate change awareness through its internal Golden Age publications, its Integrated Annual Review, CDP, website, intranet as well as the Group Wide Energy and Carbon Management Guideline, which incorporates climate change management.
Estimated timeframe (drop down option)	Current
Comment (500 characters limit)	Gold Fields has experienced that water related events, such as increased rainfall at its operation in Peru and increased water stress at its operations in Australia, has increased internal awareness of climate change. This increased awareness stimulates its internal climate change mitigation and adaptation actions and thereby supports its climate change strategy.

Accounting

5 Water Accounting

5.1: Please report the total withdrawal, discharge, consumption and recycled water volumes across your operations for the reporting period

Water use	Quantity (mega litres)
Total volume of water withdrawn	30,302
Total volume of water discharged	2,527
Total volume of water consumed	27,776
Total volume of recycled water used	33,452

5.2: For those facilities exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure, the number of which was reported in 3.2, please detail which of the following water aspects are regularly measured and monitored and an explanation as to why or why not.

Water aspect	% of facilities	Please explain
Water withdrawals – total volumes	**76-100**	
Water withdrawals – volume by sources	**76-100**	
Water discharges – total volumes	**76-100**	
Water discharges – volume by destination	**76-100**	
Water discharges – volume by treatment method	**76-100**	
Water discharge quality data – quality by standard effluent parameters	**76-100**	
Water consumption – total volume	**76-100**	
Water recycling/reuse – total volume	**76-100**	

5.3: Water withdrawals: for the reporting period, please complete the table below with water accounting data for all facilities included in your answer to question 3.2.

Country	River basin	Facility name	Facility reference number	Total water withdrawals (mega litres/ year) at this facility	How does the total water withdrawals at this facility compare to the last reporting period?	Please explain the change if substantial
South Africa	Orange River Basin	South Deep	F1	3370	Lower	The 12% decrease of water withdrawn at South Deep compared to last year was not considered substantial.
Ghana	Ankobra River Basin	Damang	F2	2069	Higher	The 14% increase of water withdrawn at Damang was mainly due to heavy rainfall at the Damang mining operation. To be able to continue operations, water needs to pumped out of the pit. This classifies as water withdrawal.
Ghana	Ankobra River Basin	Tarkwa	F3	6252	Much higher	The 76% increase of water withdrawn at Tarkwa was mainly due to heavy rainfall. Excess water needed to be withdrawn to be able to continue operations.
Australia	Western Plateau River Basin	St Ives	F4	14183	Higher	The 41% increase was mainly due to a sharp rise in pit dewatering at St Ives, exacerbated by higher rainfall levels at the mine.
Australia	Western Plateau River Basin	Agnew	F5	803	Lower	The 27% decrease in water withdrawal at Agnew compared to the previous reporting year was not considered substantive.

Peru	Tingo River Basin	Cerro Corona	F6	3626	Higher	The 10% increase in water withdrawal at Cerro Corona compared to the previous reporting year was not considered substantial.

5.3a: Water withdrawals: for the reporting period, please provide withdrawal data for the water sources used for all facilities reported in question 5.3.

Facility reference number	Surface water	Groundwater (renewable)	Groundwater (non-renewable)	Municipal water	Recycled water	Produced/ process water	Waste water	Brackish/ salt water
F1	0	1,042	0	2,328	0	0	0	0
F2	1,371	699	0	0	0	0	0	0
F3	5,155	1,051	0	46	0	0	0	0
F4	795	12,728	0	660	0	0	0	0
F5	0	803	0	0	0	0	0	0
F6	1,776	1,849	0	0	0	0	0	0

5.4: Water discharge: for the reporting period, please provide the water accounting data for all facilities reported in question 5.3

Facility reference number	Total water discharged (mega litres/year) at this facility	How does the total water discharged at this facility compare to the last reporting period?	Please explain the change if substantive
F1	317	Lower	The 11% decrease in water discharge at South Deep was not considered substantive.
F2	257	Much Lower	The 73% decrease in water discharged at Damang compared to the previous reporting year is mainly due to increased on-site water storage.
F3	378	Much Lower	The 83% decrease in water discharged at Tarkwa compared to the previous reporting year was mainly due to increased water storage as the mine recently developed spare capacity to capture

			excessive inflows of water.
F4	0	About the same	St Ives is a closed water system and therefore no water is discharged (Lake Lefroy, into which small quantities of water are discharged via seepage dams, falls within the operation's boundaries).
F5	0	About the same	Agnew is a closed water system and therefore no water is discharged.
F6	1,574	Higher	The 29% increase in water discharge at Cerro Corona was due to discharge of excess water stored in the Tailing Storage Facility (TSF). In previous years (since the beginning of the operation in 2008 until 2012), there was no necessity to discharge from the TSF. However, due to increased rainfall and to maintain the stability of the TSF, additional discharge was required.

5.4a: Water discharge: for the reporting period, please provide water discharge data by destination for all facilities reported in question 5.3

Facility reference number	Surface water	Municipal treatment plant	Saltwater	Injection for production/disposal	Aquifer recharge	Storage/waste lagoon
F1	317	0	0	0	0	0
F2	257	0	0	0	0	0
F3	378	0	0	0	0	0
F4	0	0	0	0	0	0
F5	0	0	0	0	0	0
F6	1,574	0	0	0	0	0

5.5: Water consumption: for the reporting period, please provide water consumption data for all facilities reported in question 5.3

Facility reference number	Consumption (mega litres/year)	How does this compare to the last reporting period?	Please explain the change if substantive
F1	3,053	Lower	The 13% decrease of water consumption at South Deep compared

			to the previous reporting year was not considered substantive.
F2	1,812	Much higher	The 108% increase in water consumption at Damang compared to the previous reporting year is mainly due to decreased discharge which is reflected as increased consumption.
F3	5,874	Much higher	The 346% increase in water consumption at Tarkwa compared to the previous reporting year is mainly due to decreased discharge (increased water storage capacity) which is reflected as increased consumption, although it is not in reality being consumed but stored instead.
F4	14,183	Higher	The 41% increase in water consumption was mainly due to a sharp rise in pit dewatering at St Ives, caused by higher rainfall levels at the mine.
F5	803	Lower	The 27% decrease in water consumption at Agnew was not considered substantive.
F6	2,051	About the same	The 1% decrease in water consumption at Cerro Corona was not considered substantive.

5.6: For the reporting period, please provide any available water intensity values for your organisation's products or services across its operation

Country	River basin	Product name	Product unit	Water unit	Water intensity (water unit/product unit)	Water use type	Comment
South Africa	Orange river basin	Gold	Ounces	ML	0.01115	Withdrawals	
Ghana	Ankobra River Basin	Gold	Ounces	ML	0.01059	Withdrawals	
Australia	Western Plateau river basin	Gold	Ounces	ML	0.02475	Withdrawals	
Peru	Tingo river basin	Gold	Ounces	ML	0.01145	Withdrawals	

5.7: For all facilities reported in question 3.2 what proportion of their accounting data has been externally verified?

Water aspect	% verification	What standard was used?
Water withdrawals – total volumes	76-100	ISAE 3000
Water withdrawals – volume by sources	76-100	ISAE 3000
Water discharges – total volumes	Not verified	ISAE 3000
Water discharges – volume by destination	Not verified	N/A
Water discharges – volume by treatment method	Not verified	N/A
Water discharge quality data – quality by standard effluent parameters	Not verified	N/A
Water consumption – total volume	Less than 1	N/A
Water recycling/reuse – total volume	76-100	ISAE 3000

Response

6 Governance and Strategy

6.1: Who has the highest level of direct responsibility for water within your organisation and how frequently are they briefed?

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Individual/Sub-set of the board or other	**Scheduled - quarterly**	The Vice President and Executive Vice-President of Group Sustainable Development are responsible for providing guidance on water management practices within the Group. Water related issues and performance are reported on to the board via the Safety, Health and Sustainable Development Committee (A sub-committee of the Gold Fields Limited Board). More specifically in South Africa the directors of a company may be held directly responsible for water related impacts. Therefore Gold Field's CEO and Directors hold the highest level of direct responsibility for water within the company.

6.2: Is water management integrated into your business strategy?

Yes

If yes:

6.2a: Please choose the option(s) below that best explain how water has positively influenced your business strategy

Influence of water on business strategy	Please explain
Other: Drive down costs	As part of the Group Water Management Guideline requirements, operations regularly monitor and report on their water use and quality of discharged water. Together with the formalized requirement to reduce water usage where possible, this helps to drive continuous improvements in increased water efficiency and cost reductions.
Other: Increased shared value	Gold Fields' community affairs personnel continuously engage local stakeholders through

	formalised as well as informal structures. Together with shared value and Socio-Economic Development (SED) projects Gold Fields builds relationships of trust with its surrounding communities. This benefits Gold Fields social license to operate and reduces the risk of disruptions initiated by local communities. As an example of shared value projects and SED spending, water infrastructure to ensure provision of potable water has been implemented in local communities in Ghana and Peru.

6.2b: Please choose the option(s) below that best explains how water has negatively influenced your strategy

Influence of water on business strategy	Please explain
Increased capital expenditure	Gold Fields implements precautionary measures against water impacts that are in line with its Group Water Management Guideline. Installation of capital intensive water treatment options to meet in country discharge requirements increase capital and operational expenditure. The most capital intensive precautionary measure was the installation of RO Plants in Ghana and Cerro Corona.

6.3: Does your organisation have a water policy that sets out clear goals and guidelines for action?

Yes

Gold Fields' 'Environmental and Sustainable Development Policy' refers to environmental stewardship as per ISO 14001, which also covers water. Gold Fields does not have a standalone water policy, but it is covered through the 'Environmental and Sustainable Development Policy'.

6.4: How does your organisations water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting period to the previous reporting period?

Water-related spending: % of *total CAPEX* during this reporting period compared to last reporting period	Water-related spending: % of *total OPEX* during this reporting period compared to last reporting period?	Motivation for these changes
176	13	The change in CAPEX water related spending is due to the purchasing of a Reverse Osmosis plant for Tarkwa in 2013.

7 Compliance

5.1 Was your organisation subject to any penalties and/or fines for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting period?
No

8 Targets and Initiatives

8.1: Do you have any company wide targets (quantitative) or goals (qualitative) related to water?

If yes targets and goals; if yes targets only

8.1a: Please complete the following table with information on companywide quantitative targets (ongoing or reached completion during the reporting period) and an indication of progress made

Over word count, to be added as comment:

The South African operations Beatrix, Driefontein and Kloof were encouraged to reduce water consumption; these were however subsequently unbundled into Sibanye Gold. South Deep is undergoing a ramp up phase and the mill feed is constantly changing as well as associated water use. As a result South Deep is not setting a water target. **Australian operations** do not set water targets as the water used is hyper saline, in many cases several times more saline than sea water and is not really fit for any other consumption besides industrial use (unless it goes through extensive treatment). The small amount of reasonably good quality water that is sourced is usually treated to make it suitable for domestic consumption in the camps. Therefore, setting targets to reduce consumption does not reflect the water management challenges on the mines. As mentioned above, it is also not always easy to quantify consumption reduction. For example at the Ghanaian operations the difference between withdrawal and discharge (which is qualified as consumption) increased in 2013 due to increased water storage.

Category of target	Motivation	Description of target (500 characters limit)	Quantitative unit of measurement	Baseline year	Target year	Proportion of target achieved, % value
Updated Water Management strategies and Plans	Water stewardship	All operations are required to develop Water Management strategies and Plans in line with the Group Water Management Guideline by 2015. One of the key aspects to be considered in these plans is how water efficiencies can be enhanced and water usage reduced. Though a reduction of water usage is stimulated, it is up to the operations to set targets. Water usage reduction is not necessarily a relevant target for each of the operations and not always easy	100% of operations to have updated strategies and plans in place	2013	2015	This is a new target, and therefore no performance against this target can be reported as of yet.

		to quantify (see comment box for additional information).				
Reduction in level 3 environmental incidents	Risk mitigation	A Level 3 incident is a limited non-conformance or Non-compliance with limited environmental impact and is often a repeat of the same incident. In 2013, Gold Fields experienced three level 3 environmental incidents. Gold Fields target is to reduce level 3 environmental incidents by 50% during 2014.	50% of environmental incidents at operations	2013	2014	Occurrence of environmental incidents decreased between 2012 and 2013. Several projects to further improve water quality were initiated as well as implemented (see comment box for additional information).

If yes targets and goals; if yes goals only:

8.1b: Please describe any company wide qualitative goals (ongoing or reached completion during the reporting period) and your progress achieving these

Goal	Motivation	Description of goal	Progress
Strive for zero harm	Maintain compliance licence to operate and social licence to operate	The Water Management Guideline ensures that operations have appropriate designs and safeguards that are in-line with good industry practice to prevent contaminated water impacting receptors. An important goal for Gold Fields is to ensure zero harm through sound water management practices.	In Ghana, Gold Fields facilitated the training of 32 Community Health Facilitators – as well as community Health and Sanitation Committees – at both the Tarkwa and Damang operations. Furthermore, no fines were received in 2013 and a reduction in water related environmental incidents was achieved between 2012 and 2013. Robust ground and surface water monitoring programmes were implemented, with a focus on managing the

			quality of water discharges through treatment (i.e. RO plants).
Build strong relationships of trust and enhance social license to operate	• Maintain social licence to operate • Build strong relationships of trust with our key stakeholders	Gold Fields' Water Management Guideline aims at creating shared value and leaving an enduring positive legacy. To reach this goal, Gold Fields evaluates opportunities for the development and implementation of water related shared value projects. Water has been identified as one of the most important issues for communities located near mine sites. It is for this reason that Gold Fields intends to maintain the supply of clean water to host communities or identify new opportunities to do so, where possible.	Gold Fields has conducted a baseline measure of the percentage of our host communities who have access to safe drinking water to determine the need for interventions. Gold Fields provides potable water to most of its communities in the different countries that it operates in. In 2013, review exercises were carried out at the South Deep and Cerro Corona operations, aimed at identifying opportunities to build on the existing community development projects by applying the Shared Value concept.
Engagement with peers and policy makers to advance sustainable water policies and management practices	• Adoption of sector good practice in relation to water management •	Gold Fields engagement with public policy makers is an ongoing process which is supported by the Water Management Guideline. In addition to this Gold Fields is a member of the International Council on Mining and Metals (ICMM) and has raised the issue of prioritising water target setting for mining companies as well as catchment based water stewardship through the development and adoption of a member wide water strategy.	In 2013, Gold Fields participated in a multi-stakeholder development roundtable established by the Peruvian government to pre-empt and address social conflict in the region. Representatives from Government and the National Water Authority were present among others. The roundtable will work collaboratively to analyse community needs and support the implementation of specific local level development projects to address them.