Module: Introduction

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W0.1

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 located 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 2.2 million ounces, as well as attributable Mineral Reserves of around 48 million ounces and Mineral Resources of around 1million ounces. Attributable copper Mineral Reserves total 620 million pounds and Mineral Resources 1001 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 ('NYX') and the Swiss Exchange ('SWX').

W0.2

Reporting year

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

Period for which data is reported
Wed 01 Jan 2014 - Wed 31 Dec 2014

Period for which data is reported

W0.3

Reporting boundary

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 financial control is exercised

W0.4

Exclusions

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

No

W0.4a

Exclusions

Please report the exclusions in the following table

Exclusion	Please explain why you have made the exclusion

Further Information

Module: Current State

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W1.1

Please rate the importance (current and future) of water quality and water quantity to the success of your organization

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital for operations	Important	Direct Use: Sufficient amounts of good quality freshwater are vital for gold production. In addition good quality freshwater is critical for maintaining the health of Gold Fields' employees. Indirect Use: The production processes of electricity, cyanide and diesel require sufficient amounts of good quality freshwater. Insufficient good quality freshwater therefore has the ability to impact Gold Fields' supply chain and in turn mine production.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Neutral	Direct Use: In South Africa, Gold Fields' South Deep operation installed two reverse osmosis plants to purify surplus fissure and mineralized service water to a potable standard. It is estimated that by July 2015, South Deep's municipal water purchase costs would be reduced by an estimated US$ 24,600/month. Gold Fields' understands the importance of recycling water especially within water stressed regions like South Africa. The use of recycled/brackish water is important to Gold Fields' as it allows for: 1. Increased overall water supply for other local water users; and 2. Reduced overall amount of water in the mine's water system, which reduces the risk of overflows from the mine's dams during periods of heavy rain. Indirect Use: In South Africa, Gold Fields' purchases electricity from Eskom (National power utility). Eskom has introduced desalination of polluted mine water for use at its power stations, in order to reduce the amount of freshwater used for electricity production.

W1.2

For your total operations, please detail which of the following water aspects are regularly measured and monitored and provide an explanation as to why or why not

Water aspect	% of sites/facilities/operations	Please explain
Water withdrawals- total volumes	76-100	Gold Fields requires all of their facilities to measure and monitor the total volume of water withdrawn each month.
Water withdrawals- volume by sources	76-100	Gold Field's operations make use of various water sources. All eight operations withdraw renewable groundwater. In addition four operations (South Deep, Tarkwa, St Ives and Granny Smith) withdraw municipal water, three operations (Damang, Tarkwa and Cerro Corona) withdraw fresh surface water and two operations (St Ives and Granny Smith) withdraw brackish water. Certain water sources are vulnerable with respect to the integrity of the surrounding environment and these are actively measured and monitored at each of the operations. Frequent measurements and monitoring of each individual source allows Gold Fields to monitor withdrawal trends and to inform management decisions based on these trends.
Water discharges- total volumes	76-100	The total discharge volume of each individual operation is measured and monitored to ensure that environmental regulations are adhered to. All operations measure their total discharge volumes and monitor the quality of the discharge. In addition, total discharge volumes are tracked to ensure that the water balance is accurate and to meet operational licensing requirements.
Water discharges- volume by destination	76-100	Gold Fields require all of their operations to measure and monitor the volume of water discharged to each destination per operation. This is done to ensure that sufficient treatment of the discharged water is maintained and that volumes discharged to each source do not exceed the licensing requirements. Five out of the eight Gold Field's operations discharge water. At the Ghanaian operations: Damang discharges to the Huni and Bonsa rivers, and Tarkwa discharges to the North Suman and South Awunaben rivers. The Cerro Corona operation in Peru discharges to the Mesa de Plata Creek. The Australian operation Granny Smith discharge water into Lake Carey. South Deep discharges water into the Leeuspruit as a requirement of its license conditions.
Water discharges- volume by treatment method	76-100	As Gold Field's operations have numerous processes, the volume of water discharged per treatment method needs to be measured and monitored for all operations. This is done to ensure that the quality of the discharged water meets the licensing requirements. In addition the volume per treatment method is measured and monitored to ensure the maintenance of an accurate water balance.
Water discharge quality data- quality by standard effluent parameters	76-100	The quality data of discharged water is measured and monitored by all of the Gold Fields operations. This is done to ensure that the quality of the water which is discharged is kept within the range permitted by our licensing requirements.
Water consumption- total volume	76-100	The total water consumption volume is measured and monitored to track water efficiency initiatives and as an input into operational water balances.
Facilities providing fully-functioning WASH services for all workers	76-100	As employee health is vitally important to Gold Fields, all operations ensure that the workforce obtain access to clean potable and wash water for sanitation services.

W1.2a

Water withdrawals: for the reporting year, please provide total water withdrawal data by source, across your operations

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Fresh surface water	6981.20	Lower	The total fresh surface water withdrawals decreased in this reporting year by 23%. This is due to a 15% decrease in fresh surface water use at the Damang operation and a 48% decrease at the Tarkwa operation when compared to the previous reporting year. A decrease was recorded even though the fresh surface water withdrawal increased by 7% at St Ives and 29% at Cerro Corona. The withdrawals for the two aforementioned operations accounted for a weighted increase in fresh surface water withdrawal of 0.6% and 5.6% respectively.
Brackish surface water/seawater	931.25	This is our first year of measurement	The Granny Smith mine was only purchased by Gold Fields' in October 2013. Therefore 2014 was the first year that brackish surface water monitoring was conducted by Gold Fields.
Rainwater	0	Not applicable	None of Gold Fields' operations can avoid taking in rainwater as it falls directly into their facilities. It is therefore difficult to separate these figures from the overall withdrawal of the operations.
Groundwater - renewable	19799.56	Higher	The 9% increase in renewable groundwater results primarily from the addition of two new Australian operations: Darlot and Granny Smith, during 2014. The combined renewable groundwater withdrawals from these two sites account for 38% of Gold Fields' total renewable groundwater withdrawal during 2014. The addition of the Lawlers operation to the Agnew site resulted in larger volumes of renewable groundwater withdrawals as well. The Lawlers acquisition resulted in a 4.2% increase with respect to total renewable groundwater withdrawals in this reporting year. It is important to note that all of the other Gold Fields operations recorded a decrease in renewable groundwater withdrawals in this reporting year.
Groundwater - non-renewable	0	Not applicable	None of the Goldfields operations make use of non-renewable groundwater
Produced/process	0	Not applicable	None of the Goldfields operations make use of produced/process water

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
water			
Municipal supply	2494.75	Lower	The 18% decrease in municipal supply withdrawals is attributed to the 15.6%, 49% and 7% decrease in South Deep, Tarkwa and St Ives respectively.
Wastewater from another organization	0	Not applicable	None of the Goldfields operations make use of wastewater from another organization
Total	30206.76	About the same	The total water withdrawals increased by 0.3% during this reporting year. This was due to the acquisition of the Australian operations: Darlot, Granny Smith and Lawlers in October 2013. The addition of these three operations resulted in a 41% increase in the renewable groundwater withdrawals. Granny Smith consumed 6910 ML of renewable ground water in this reporting year. This accounts for 31% of the total renewable ground water withdrawal for this reporting year. St Ives, the largest contributor to the renewable ground water withdrawal decreased its withdrawals by 36% from 12728 ML to 8106.49 ML during 2014. The 48% reduction in fresh surface water withdrawals at Tarkwa resulted in the total withdrawals being approximately the same as in the previous reporting period. In the event that Tarkwa did not reduce their fresh surface water withdrawals by 48%, the total withdrawals would have increased by 9% in this reporting year.

W1.2b

Water discharges: for the reporting year, please provide total water discharge data by destination, across your operations

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Fresh surface water	5587.73	Much higher	The discharge to fresh surface water sources increased by 121% from 2526.00 ML in 2013 to 5587.73 ML in 2014. This is attributed to the increased discharge at the Tarkwa operation. The discharge at Tarkwa amounted to 3521.23 ML in 2014 due to two factors: ☐ High during the months of June, July and August required more water to be discharged from the pit to maintain safe operating conditions; and ☐ mine. Water which would typically be recycled from the heap leach areas was treated (via reverse osmosis plants) and discharged to fresh surface water sources (i.e. Rivers). This lead to a significant increase in discharge volumes during the current reporting period.
Brackish surface water/seawater	5955.08	This is our first year of measurement	The Granny Smith mine was acquired by Gold Fields' in October 2013. In previous reporting periods no discharge was sent to brackish surface water sources. As such this is the first year in which discharge to a brackish source was measured. The Granny Smith operation discharges water to a naturally saline lake (Lake Carey) at two points for which Government authorization has been received.
Groundwater	0	About the same	No discharges were made to groundwater sources by any of Gold Field's operations during 2014.
Municipal treatment plant	0	About the same	None of Gold Field's operations discharge water to municipal facilities for treatment.
Total	11542.81	Much higher	The total discharge volume was much higher during 2014 (11542.81 ML) than in 2013 (2526.00 ML) due to the increase in both fresh surface water discharge and the addition of brackish surface water discharge.

W1.2c

Water consumption: for the reporting year, please provide total water consumption data, across your operations

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
22195.17	Lower	The total consumption of water in this reporting year has decreased by 20%. This is attributed to reduced water consumption at the following operations: St Ives, Tarkwa, Damang, South Deep and Cerro Corona. St Ives, which consumes the majority of water in Goldfields' operations, reduced its consumption by 33%. Goldfields still recorded a decrease in overall consumption during 2014 despite the fact that the three new operations were acquired namely Darlot, Granny Smith and Lawlers. These three operations accounted for 12% of the total consumption figure.

W1.3

Do you request your suppliers to report on their water use, risks and/or management?

No

W1.3a

Please provide the proportion of suppliers you request to report on their water use, risks and/or management and the proportion of your procurement spend this represents

Proportion of suppliers %	Total procurement spend %	Rationale for this coverage

W1.3b

Please choose the option that best explains why you do not request your suppliers to report on their water use, risks and/or management

Primary reason	Please explain
Other:	Gold Fields' South African operation, South Deep has recently started implementing a supplier engagement programme with their top 40 suppliers. The programme currently focuses on carbon management, but the mine aims to engage with suppliers on water issues in the future. The success of supplier engagement at South Deep, will determine whether the programme will be rolled out to the rest of Gold Fields' operations.

W1.4

Has your organization experienced any detrimental impacts related to water in the reporting period?

Yes

W1.4a

Please describe the detrimental impacts experienced by your organization related to water in the reporting year

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
Ghana	Other: Ankobra	Other: production of concentrated brine as an unintended consequence of	Higher operating costs	Please note: This impact is not detrimental to Gold Fields' business however there is a negative impact as a	1 year	The two Reverse Osmosis treatment plants cost US$ 28 million to	Increased investment in new technology	In response to the issue of concentrated brine, Gold Fields' is considering the potential feasibility of two

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
		the construction of reverse osmosis water treatment plants at the North and South Heap Leach Facilities		result of this specific activity. Although Tarkwa's North and South Heap Leach facilities have been closed for over a year now, there is still an interaction that continues to take place between rainwater and the stacked ore. This results in hyper saline water discharges. In order to manage and prevent the detrimental impact of discharging this water, Gold Fields' commissioned two reverse osmosis water treatment plants, with the aim of purifying the water before discharge. However, concentrated brine was produced as an unintended consequence of the reverse osmosis plants. This negatively impacted the operation of the RO plants, and the concentrated brine is currently being stored on site until an appropriate disposal solution has been found.		implement and the ongoing treatment costs US$ 2 million per year.		response options: ☐ Installation of an industrial-scale treatment plant; ☐ of the brine to produce nitrate solutions that can be used to irrigate and fertilize rubber and oil palm trees. Tarkwa is currently conducting irrigation trials with 750 trees planted during 2014.

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
Australia	Other: Western Plateau River Basin	Other: High rainfall event following cyclone development in the Northern parts of Western Australia	Other: temporary delay in operation's production	Please note: This impact is not detrimental to Gold Fields' business however there is a negative impact as a result of this specific activity. In 2014 St Ives experienced three days of extreme rainfall which resulted in flooding of the Neptune pit. At the time, the pit was still in development, and flood bunds had not yet been installed. Four to five weeks of pit dewatering was required, during which production from the Neptune pit was temporarily delayed. The delay did not however result in any lost ounces.	5 weeks	US$ 2 million was spent on dewatering the Neptune pit during 2014. An additional US$ 150,000 was spent on building access roads and flood bunds.	Other: weather monitoring and flood management strategies	Gold Fields Australian operations actively monitor weather data and cyclone developments through the Australian Government Bureau of Meteorology. Operations are warned a few days prior to the predicted cyclone event to allow for adequate planning. Each operation has flood management plans in place, especially at St Ives (partly a surface mine) where flood bunds are installed on new pits to prevent future delays. St Ives also has spare mill capacity, which allows for quicker production catch up after delayed production.
South Africa	Orange	Other: Above average rainfall	Other: contamination of freshwater rivers	Please note: This impact is not detrimental to Gold Fields' business however there is a negative impact as a result of this specific activity. In March 2014 the pollution control dam and the return water dam at Gold Fields' South Deep operation overflowed	Uncertain	The financial impact was determined based on the cost of the response strategy implemented by Gold Fields' South Deep. During 2014, South Deep spent around	Other: Water management plan	Gold Fields' is managing this impact with the following measures: ☐ Regional application of the new Corporate Water Management Guideline. This includes the development and implementation of well-defined Water Management Action Plans. These plans seek

Country	River basin	Impact indicator	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				into adjacent rivers. The overflow occurred after excessive average rainfalls and amid lower production levels, which raised the mine's water balance.		US$ 2 million on water related initiatives.		to minimize the potential for dam overflows; ☐ Implementation of physical measures to manage storm water run-off and to keep clean water and mine water separate; ☐ Dy and predictive water modelling to support short-, medium- and long-term water-related risk and opportunity management. US$ 6 million has been allocated for water related capital expenditure which is estimated to be spent during 2015 and 2016 on the new lined return water dam.

W1.4b

Please choose the option below that best explains why you do not know if your organization experienced any detrimental impacts related to water in the reporting year and any plans you have to investigate this in the future

Primary reason	Future plans

Further Information

Module: Risk Assessment

Page: W2. Procedures and Requirements

W2.1

Does your organization undertake a water-related risk assessment?

Water risks are assessed

W2.2

Please select the options that best describe your procedures with regard to assessing water risks

Risk assessment procedure	Coverage	Scale	Please explain
Comprehensive company-wide risk assessment	Direct operations and supply chain	All facilities and suppliers	Gold Fields' risk assessment is based on the Enterprise-wide Risk Management (ERM) process which is aligned with the ISO 31000 international risk management standard, as well as the risk management requirements of South Africa's King III Code. The Group's top 10 risks and 5 regional risks are identified though the ERM process which prioritizes risks on the basis of probability and severity. Water risks are identified within the ERM process for both Gold Fields direct operations and supply chain. In addition to the overarching risk assessment, each operation implements an Environmental Management System (EMS), through which it assesses, manages, monitors and reports on water use and the quality of its discharges (where these occur).

W2.3

Please state how frequently you undertake water risk assessments, what geographical scale and how far into the future you consider risks for each assessment

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Business unit	>6 years	The Group Executive Committee and the Board, via the Audit Committee, are responsible for keeping oversight of the overall system of risk assessment. The Audit Committee is responsible for the identification and mitigation of new and existing risks, including climate change and water related risks. Each operation may undertake further water risk assessment processes as required. All risks identified have control measures and mitigating strategies in place.

W2.4

Have you evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy?

Yes, evaluated over the next 5 years

W2.4a

Please explain how your organization evaluated the effects of water risks on the success (viability, constraints) of your organization's growth strategy?

Sufficient amounts of good quality freshwater is vital for gold production inputs. Insufficient water resources or low quality water would negatively impact on Gold Fields' growth strategy, by limiting the potential for expansion into new growth projects. Additional factors such as importing water or purifying water would need to be considered as part of the growth strategy. Hence responsible water management remains a vital component of Gold Fields' license to operate and social license across all operations and projects. Managing current and future water security risks, which include both quantity and quality of supply as well as costs, is also essential to ensure sustainable production for existing operations and the future viability of projects. For this reason Gold Fields' has identified water security as one

of their top 15 risks.
The Group Executive Committee and the Board, via the Audit Committee, are responsible for keeping oversight of the overall system of risk assessment. The Audit Committee is responsible for the identification and mitigation of new and existing risks, including climate change and water related risks. All new and existing risks are taken into account when developing Gold Fields' growth strategy. In terms of growth, new mining projects are particularly susceptible to the loss (or non-achievement) of a social license to operate. Responsible water management is a key factor that influences a mine's social license to operate. If a mine is unable to effectively manage their social license to operate and associated water issues then the risk of the mine shutting down is high. The growth strategy therefore takes into account not only the social license to operate but also any water issues that may be associated with new growth projects. Gold Fields' recognizes the significance of water risks on its growth projects, such as Salares Norte in Chile, which is exposed to water scarcity. The Salares Norte growth project has therefore taken into account the risk associated with water scarcity and is investigated methods of securing a supply of water.

W2.4b

What is the main reason for not having evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy, and are there any plans in place to do so in the future?

Main reason	Current plans	Timeframe until evaluation	Comment

W2.5

Please state the methods used to assess water risks

Method	Please explain how these methods are used in your risk assessment
Internal company knowledge WBCSD Global Water Tool Other: IMIU (International Mining Industry Underwriters) (yearly, as part of insurance risk assessment)	Internal knowledge of water risks is managed by Gold Fields' Group Executive Committee and the Board, via the Audit Committee who is responsible for the identification and oversight of new and existing water risks across all operations. The water risks form part of the Group wide company risk register. Internal knowledge of water risks from each of Gold Fields' operations is also included through mine level water risk assessments. All risks identified have control measures and mitigating strategies in place. Gold Fields' uses the WBCSD tool because it provides an in depth analysis of water

Method	Please explain how these methods are used in your risk assessment
	risks per country and watershed. The tool compares operational water use to sanitation, population and biodiversity data on a watershed and country basis. The tool provides input into the WDP response which is then reviewed by the Vice President of Group Sustainable Development who is involved with the oversight of key water risks at a group level. The WBCSD tool is chosen to asses water risks as it assists Gold Fields' in further understanding their water impacts and risks at a detailed regional and watershed level across all operations. Each year as part of Gold Fields' insurance risk assessment, the International Mining Industry Underwriters assess water risks for each operation. This method is used to identify water risks because it provides insight into possible insurance liabilities (extreme weather and water impacts) that Gold Fields' operations may be exposed to.

W2.6

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

Issues	Choose option	Please explain
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 as well as the use of historical weather data and other factors such as supply chain analysis. Key water security or quality issues and risks are reported on a quarterly basis to the SH&SD Committee of the Gold Fields Limited Board. This issue is also reported At a Group level this issue is reported in the company risk register. Monitoring of ground and surface water quality on and surrounding the mine lease are required as part of each mines water use license requirements, monitoring programme or in terms of other regulatory requirements.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	Risks associated with 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. Key regulatory changes and risks associated with regulatory changes or tariffs would also be reported to the audit committee.
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 and other key stakeholders to be able to lodge their grievances with the mine. Stakeholder issues relating to water are included in the group wide company risk register.
Current implications of water on your	Relevant,	This is assessed as part of Gold Fields companywide risk register. This assessment of water risks

Issues	Choose option	Please explain
key commodities/raw materials	included	associated with key commodities is conducted if there are indications that water supply/quantity might be an issue. Water risks also take into account water scarce areas and areas that have been previously exposed to water impacts. 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 the environmental compliance consists of assessing water related risks and the potential impacts on ecosystems and habitats as part of Environmental Impact Assessments and the ISO 14001 certified environmental management systems. Water related impacts on ecosystems and local habitats would also be assessed as part of the group wide risk management process. Legal alerts regarding significance changes to local environmental legislation are monitored.
Current river basin management plans	Relevant, included	In Cerro Corona aspects of catchment based plans are included as Gold Fields' is improving water quality and access in Hualgayoc City through the construction of a water pipeline from a well at Cerro Corona, a programme to identify and repair water leaks in the existing water infrastructure, and remediation of legacy mining activities (not associated with Gold Fields) that are contaminating a local stream.. Current river basin management is not included at any of the other Gold Fields' operations.
Current access to fully-functioning WASH services for all employees	Relevant, included	As employee health is vitally important to Gold Fields, all operations ensure that the workforce obtain access to clean potable and wash water for sanitation services.
Estimates of future changes in water availability at a local level	Relevant, included	Regional application of the Group Water Management Guideline as well as the development and implementation of Water Management Action Plans are aimed at assessing water risks at operational level. Water availability at a local level is further addressed through dynamic and predictive water modelling to support short-, medium- and long-term water-related risk management.
Estimates of future potential regulatory changes at a local level	Relevant, included	Gold Fields' 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 through a variety of tools, one being the group wide company risk register. The feedback from these engagements is then used to identify risks related to regulatory changes and the associated mitigation measures.
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 governments) 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. The 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 flooding of access roads in the Australian region.
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	The status of an ecosystem or a species is usually updated through legislation. Therefore if a particular ecosystem or habitat becomes endangered then this will generally be updated in the local environmental legislation. Legal alerts regarding local environmental legislation are monitored by

Issues	Choose option	Please explain
		Gold Fields head of compliance as well as other key regional management. Any associated risks are assessed by the group wide company risk register.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, included	Water balances are weather data are two of the primary tools used for scenario (i.e. changes in rainfall patterns or groundwater recharge) analysis on whether sufficient amounts and quality of water are available at a local level. Risks associated with quantity and quality of water are assessed by the group wide company risk register.
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	Not relevant, explanation provided	Not applicable

W2.7

Which of the following stakeholders are always factored into your organization's water risk assessments?

Stakeholder	Choose option	Please explain
Customers	Not relevant, explanation	Gold Fields delivers is product to refineries and does not engage directly with customers beyond a refinery level. Therefore they are not factored them into the company's water risk assessments.

Stakeholder	Choose option	Please explain
	provided	
Employees	Relevant, included	All relevant employees at a corporate, regional and operational level 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 are an integral part of 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. In South Africa communities in nearby towns such as Westonaria, Bekkersdal and Simunye are engaged with. In Australia the remote locations of the operations has resulted in fewer neighboring water users at a local level.
Regulators	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.
River basin management authorities	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 and if Gold Fields' believes that it has a direct impact on business then they would be 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.
Other	Not relevant, explanation provided	Not applicable

Please choose the option that best explains why your organisation does not undertake a water-related risk assessment

Primary reason	Please explain

Further Information

Module: Implications

Page: W3. Water Risks

W3.1

Is your organization exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure?

Yes, direct operations and supply chain

W3.2

Please provide details as to how your organization defines substantive change in your business, operations, revenue or expenditure from water risk

Each of Gold Fields' operations are exposed to water related risks with potentially substantive impacts. Water risks form part of Gold Fields' risk assessment. Risks are divided into strategic and operational as the materially of the two differ. Therefore separate matrixes are used for strategic and operational risks. These two risk matrixes are used to assess the severity and probability of each risk. Depending on the risk score, Gold Fields will decide if the risk warrants a position on the Group Risk Register. Gold Fields' definition for substantive change is based on one day loss of production if the probability of the risk occurring is high such as once a week, once a month or once every fortnight. Substantive change from water risks applies to Gold Fields' operations as well as its suppliers that have a direct impact on operational performance.
The most important water related risks are:

- Losing their social license to operate across all operations. The establishment and maintenance of a strong social licence to operate from Gold Fields' host communities – and regional and national governments – is essential for the sustainability and growth of the business. Gold Fields manages this risk through the implementation of Shared Value initiatives, community engagement and investment so as to avoid delays or disruptions at operations caused by communities;
- Losing their license to operate from a compliance perspective across all operations. Gold Fields is required to comply with regulations under its permits and licenses. Failure to do so could result in the curtailment or halting of production at the affected locations;
- The risk of water reductions for operations situated in South Africa and Australia, as these regions are classified by the WBCSD tool as water stressed. However, South Deep Mine currently has a positive water balance. Australian operations 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 increasing operational costs. Though currently not experienced, the risk of reduced water availability has the potential to disrupt operations. 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 revenue.

W3.2a

Please provide the number of facilities* per river basin exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure and the proportion of total operations this represents

Country	River basin	Number of facilites	Proportion of total operations exposed to risk within river basin (%)	Comment
South Africa	Orange	1	11-20	Gold Fields' defines facilities as mining operations as whole including processing and mining.
Australia	Other: Western Plateau	4	31-40	Gold Fields' defines facilities as mining operations as whole including processing and mining.
Ghana	Other: Ankobra	2	21-30	Gold Fields' defines facilities as mining operations as whole including processing and mining.
Peru	Other: Tingo	1	11-20	Gold Fields' defines facilities as mining operations as whole including processing and mining.

W3.2b

Please provide the proportion of financial value that could be affected at river basin level associated with the facilities listed in W3.2a

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected within the river basin	Comment
South Africa	Orange	% global production capacity	11-20	Gold Fields' defines facilities as mining operations as whole including processing and mining. Whilst all of our operations due to the nature of mining are affected in some way to water related risks, this is at varying degrees and all are covered by management activities.
Australia	Other: Western Plateau	% global production capacity	31-40	Gold Fields' defines facilities as mining operations as whole including processing and mining. Whilst all of our operations due to the nature of mining are affected in some way to water related risks, this is at varying degrees and all are covered by management activities.
Ghana	Other: Ankobra	% global production capacity	21-30	Gold Fields' defines facilities as mining operations as whole including processing and mining. Whilst all of our operations due to the nature of mining are affected in some way to water related risks, this is at varying degrees and all are covered by management activities.
Peru	Other: Tingo	% global production capacity	11-20	Gold Fields' defines facilities as mining operations as whole including processing and mining. Whilst all of our operations due to the nature of mining are affected in some way to water related risks, this is at varying degrees and all are covered by management activities.

W3.2c

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

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
South Africa	Orange	Other: AMD Management	Other: Ongoing Acid Mine Drainage generation	Water management remains a current sensitive public issue in South Africa. Significant parts of the country suffer from water stress, whilst the Gauteng area (in which South Deep is situated) suffers from the historical environmental legacy of more than a century of intensive, deep-level gold mining. This legacy means that there are high-levels of AMD in and around	Current-up to 1 year	Unlikely	Medium-high	Other: Mine Closure Planning	During 2014, South Deep spent around US$2 million.	Gold Fields implements a range of measures to prevent or contain Acid Mine Drainage (AMD) at its operations – and takes effective remedial action where incidents are identified. There were no material cases of AMD reported in 2014. Nonetheless, South Deep has – in the context of broader historical AMD legacy issues in the Gauteng area – taken a proactive approach to long-term AMD management through its comprehensive

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				Johannesburg – most of it caused by companies and operations that have since shut down. Whilst not contributing to local AMD, there are concerns that South Deep's long life will mean that they are one of the last mine's operating as Gauteng's AMD issues become more acute – and social as well as regulatory pressure to act on the issue grows. Therefore Gold Fields has identified						water management plan. This involves ongoing water monitoring, containment of any AMD generation on the old tailings facilities and water-treatment solutions that purify surplus fissure and process water to a potable standard. In 2015, additional technical studies are planned to develop a solution for managing AMD generation in the underground workings at mine closure. Underground AMD generation is well managed

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				the risk of Acid Mine Drainage (AMD) at its South Deep mine in South Africa.						during the operational phase by ongoing pumping to surface of the underground water. Although Gold Fields has commissioned various technical studies to identify the steps required to prevent or mitigate the potentially material AMD impacts at its Cerro Corona and South Deep operations, none of these studies has allowed Gold Fields to generate a reliable estimate of the total potential impact on the

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										Company. Any AMD which is currently generated is contained on Gold Fields property at all operations where it occurs and is managed as part of each mine's operational water management strategy. The relevant regulatory authorities are also kept appraised of the Group's efforts to manage AD through various submissions and other communications.
Peru	Other: Tingo	Other: AMD Management	Other: Ongoing Acid Mine	Gold Fields has identified the current	Current-up to 1 year	Unlikely	Medium-high	Other: Mine Closure Planning	Annual updates to Cerro	Cerro Corona's tailings and waste rock

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
			Drainage generation	risk of Acid Mine Drainage (AMD) at its Cerro Corona mine in Peru. A lack of an effective operational and mine closure strategy could potentially cause release of acid mine water, which could have negative environmental or social impacts.. This could result in financial and reputational liabilities for Gold Fields.					Corona's mine closure costs estimates and plans, around US$ 50, 000.	facilities were designed to avoid and mitigate the risks of AMD. In addition, the mines closure plan contains various strategies, which are updated at least every two years as new technical information becomes available. In Cerro Corona Gold Fields' is improving water quality and access in Hualgayoc City through the construction of a water pipeline from a well at Cerro Corona, a programme to identify and repair water leaks in the existing water

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										infrastructure, and remediation of legacy mining activities (not associated with Gold Fields) that are contaminating a local stream.. Current river basin management is not included at any of the other Gold Fields' operations. Although Gold Fields has commissioned various technical studies to identify the steps required to prevent or mitigate the potentially material AMD impacts at its Cerro Corona and South Deep operations,

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										none of these studies has allowed Gold Fields to generate a reliable estimate of the total potential impact on the Company. Any AMD which is currently generated is contained on Gold Fields property at all operations where it occurs and is managed as part of each mine's operational water management strategy. The relevant regulatory authorities are also kept appraised of the Group's efforts to manage AD

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										through various submissions and other communications.
South Africa	Orange	Other: tailing dam stability	Other: Environmental and infrastructure damage	During extreme weather events, the tailing dams at Gold Fields' operations could be exposed to the 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	Unknown	Unlikely	High	Other: best practice management, monitoring and external audit of tailing dams	The group-wide TSF audit during 2014 cost US$ 100,000.	All Gold Fields' operations have Life-of-Mine tailings management plans. All TSFs and associated pipeline and pumping infrastructure are subject to ISO 14001 certification, external tailings audits, as well as regular inspection and formal annual reporting. TSFs are also subject to inspection for technical integrity by independent experts at least once every three years – or more frequently

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				regions, as well as the position of tailing dams, certain operations such as Cerro Corona are at higher risk than others due to the topographical location of the mine.						where required by local circumstances or regulations. A Group-wide tailings facility audit – which included all 15 operational and 10 dormant TSFs – was undertaken during the latter half of 2014. Ordinarily, these audits are conducted on a three-yearly basis. However, mining companies globally increased their commitment to ensuring the safety of their tailings facilities following a major breach of Imperial Metals' copper and gold tailings pond at Mount

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										Polley in British Colombia in August 2014. Gold Fields therefore initiated its Group-wide TSF audit earlier than usual. The audit, which was conducted by Golder Associates, reviewed all key aspects of tailings facility management, with a focus on TSF stability, compliance and environmental management. All TSFs were found to be well-managed and are either already aligned with global leading practice, or have concrete plans in place for alignment.

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										In general the Gold Fields TSFs are within the top quartile of industry leading practice in terms of design, operation, and management.
Peru	Other: Tingo	Other: tailing dam stability	Other: Environmental and infrastructure damage	During extreme weather events, the tailing dams at Gold Fields' operations could be exposed to the risk of overtopping and instability. This is a generic risk, in principle existing at every operation, though depending on the	Unknown	Unlikely	High	Other: best practice management, monitoring and external audit of tailing dams	The group-wide TSF audit during 2014 cost US$ 100,000.	All Gold Fields' operations have Life-of-Mine tailings management plans. All TSFs and associated pipeline and pumping infrastructure are subject to ISO 14001 certification, external tailings audits, as well as regular inspection and formal annual reporting. TSFs are also subject to inspection for technical integrity by

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				severity of extreme weather events in the different regions, as well as the position of tailing dams, certain operations such as Cerro Corona are at higher risk than others due to the topographical location of the mine.						independent experts at least once every three years – or more frequently where required by local circumstances or regulations. A Group-wide tailings facility audit – which included all 15 operational and 10 dormant TSFs – was undertaken during the latter half of 2014. Ordinarily, these audits are conducted on a three-yearly basis. However, mining companies globally increased their commitment to ensuring the safety of their tailings facilities following a

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										major breach of Imperial Metals' copper and gold tailings pond at Mount Polley in British Colombia in August 2014. Gold Fields therefore initiated its Group-wide TSF audit earlier than usual. The audit, which was conducted by Golder Associates, reviewed all key aspects of tailings facility management, with a focus on TSF stability, compliance and environmental management. All TSFs were found to be well-managed and are either already aligned with global

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										leading practice, or have concrete plans in place for alignment. In general the Gold Fields TSFs are within the top quartile of industry leading practice in terms of design, operation, and management.
Ghana	Other: Ankobra	Other: tailing dam stability	Other: Environmental and infrastructure damage	During extreme weather events, the tailing dams at Gold Fields' operations could be exposed to the risk of overtopping and instability. This is a generic risk, in principle existing at	Unknown	Unlikely	High	Other: best practice management, monitoring and external audit of tailing dams	The group-wide TSF audit during 2014 cost US$ 100,000.	All Gold Fields' operations have Life-of-Mine tailings management plans. All TSFs and associated pipeline and pumping infrastructure are subject to ISO 14001 certification, external tailings audits, as well as regular inspection and formal annual

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				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 such as Cerro Corona are at higher risk than others due to the topographical location of the mine.						reporting. TSFs are also subject to inspection for technical integrity by independent experts at least once every three years – or more frequently where required by local circumstances or regulations. A Group-wide tailings facility audit – which included all 15 operational and 10 dormant TSFs – was undertaken during the latter half of 2014. Ordinarily, these audits are conducted on a three-yearly basis. However, mining companies globally increased their

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										commitment to ensuring the safety of their tailings facilities following a major breach of Imperial Metals' copper and gold tailings pond at Mount Polley in British Colombia in August 2014. Gold Fields therefore initiated its Group-wide TSF audit earlier than usual. The audit, which was conducted by Golder Associates, reviewed all key aspects of tailings facility management, with a focus on TSF stability, compliance and environmental management. All TSFs were

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										found to be well-managed and are either already aligned with global leading practice, or have concrete plans in place for alignment. In general the Gold Fields TSFs are within the top quartile of industry leading practice in terms of design, operation, and management.
Australia	Other: Western Plateau	Other: tailing dam stability	Other: Environmental and infrastructure damage	During extreme weather events, the tailing dams at Gold Fields' operations could be exposed to the risk of overtopping and	Unknown	Unlikely	High	Other: best practice management, monitoring and external audit of tailing dams	The group-wide TSF audit during 2014 cost US$ 100,000.	All Gold Fields' operations have Life-of-Mine tailings management plans. All TSFs and associated pipeline and pumping infrastructure are subject to ISO 14001 certification,

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				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 such as Cerro Corona are at higher risk than others due to the topographical location of the mine.						external tailings audits, as well as regular inspection and formal annual reporting. TSFs are also subject to inspection for technical integrity by independent experts at least once every three years – or more frequently where required by local circumstances or regulations. A Group-wide tailings facility audit – which included all 15 operational and 10 dormant TSFs – was undertaken during the latter half of 2014. Ordinarily, these audits are conducted on a three-yearly basis.

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										However, mining companies globally increased their commitment to ensuring the safety of their tailings facilities following a major breach of Imperial Metals' copper and gold tailings pond at Mount Polley in British Colombia in August 2014. Gold Fields therefore initiated its Group-wide TSF audit earlier than usual. The audit, which was conducted by Golder Associates, reviewed all key aspects of tailings facility management, with a focus on

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										TSF stability, compliance and environmental management. All TSFs were found to be well-managed and are either already aligned with global leading practice, or have concrete plans in place for alignment. In general the Gold Fields TSFs are within the top quartile of industry leading practice in terms of design, operation, and management.
South Africa	Orange	Other: Increased water stress	Higher operating costs	Water management remains a sensitive public issue in South Africa. Significant	Unknown	Unknown	Low-medium	Other: water management	During 2014, South Deep spent around US$2 million on water-related initiatives	This risk is managed through increased water efficiency and reduced dependency on external water

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				parts of the country suffer from water stress and the South Deep mine situated in Gauteng suffers from the historical environmental legacy of more than a century of intensive, deep-level gold mining. Although South Deep mine has a positive water balance and is therefore unlikely to be exposed to water stress, purchasing of products manufactured in the region which require water in the						supply. Two RO plants, were installed in 2014 at South Deep, to purify surplus fissure and mineralised service water to a potable standard. This is then reused by the mine. In 2014 the amount of water treated by the RO plants improved from 8Mℓ/month in January to 40Mℓ/month in December. In 2015 it is envisaged that the RO plant capacity at South Deep will increase to about 150Mℓ/month. This approach: ☐ Cuts the mine's water purchase costs

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				production process could be impacted if exposed to water stress. This could increase operating costs and potentially delay production.						by an estimated R300,000/month from July 2015; ☐ Increases overall supply for other local water users; ☐ Reduces the overall amount of water in the mine's water system – reducing the risk of overflows from the mine's dams during periods of heavy rain.
Peru	Other: Tingo	Reputational-Community opposition	Closure of operations	Water security poses a significant long-term challenge at Cerro Corona due to its remote, high-altitude location. Furthermore, the mine	Unknown	Unlikely	High	Other: Comply with local legal requirements or company own internal standards, whichever is more stringent.	Gold Fields' invested US$ 1.2 million during 2014 related to improving the water system for the Hualgayoc region in Peru.	Cerro Corona invested US$ 1.2 million and has proactively implemented a range of responsible water management initiatives, including: ☐ Rainwater storage and

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				operates in a national context of poorly developed water infrastructure, water quality degradation and serious water related activism at both a local and regional level. Although Cerro Corona has not as yet been materially affected by such activism – this has had a serious impact on other operators in the Cajamarca region. Therefore						reuse: Rainwater is stored at Cerro Corona's TSF within a closed-circuit water system, treated and reused by the operation. This enhances the mine's own water supply, whilst also minimising both the amount of water discharged and the amount of local groundwater abstracted; ☐ Community water supplies: Cerro Corona has committed to providing local communities with additional, potable water during the dry season and has completed a number of

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				the risk of not attaining or maintaining a social license to operate due to negative water impacts can lead to operational disruption, project delays and community dissatisfaction which impacts on productivity. Furthermore it has been predicted that climate change will increase water scarcity. For this reason mines need to be aware of their social responsibility to safeguard						projects focussed on water provision to nearby communities as well as improving existing municipal water systems (p115); ☐ Water monitoring: Cerro Corona works closely with community-elected representatives to monitor water quality and quantity at the Las Tomas Spring. Iron and manganese levels at the spring – which sits inside the 'final' future footprint of Cerro Corona's TSF – have improved since

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				water and natural resources for surrounding local communities.						the mine began operating Such approaches have – in combination with effective community engagement practices and the generation of shared local value – played a key role in protecting Cerro Corona from the kinds of social tensions affecting other nearby mining operations.
Australia	Other: Western Plateau	Other: Security of water supply	Other: temporary production disruptions.	Generally the shortage of water in the Western Australia goldfields is driven by quality as much of the water is hypersaline and therefore	1-3 years	Unlikely	Medium	Other: updating water management strategy	The cost of the water management strategy is managed in house.	In 2014, the Australia region implemented a new water management strategy to support the integration of the Yilgarn South Assets. This also involved

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				not suitable for use and expensive to treat.						extensive analysis of the water balances at Agnew and St Ives. The strategy is based on: ☐ The integration of water management into business objectives; ☐ Sound water management planning and practices; ☐ The measurement and reporting of the water impacts of each operation and associated mitigation measures. Life Of Mine (LOM) water strategies are being developed in 2015 for Granny Smith. At St Ives we have secured new

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										agreements for water and are diversifying our sources. With the acquisition of the Lawlers mine, Gold Fields' has a more diverse source of water for Agnew
Australia	Other: Western Plateau	Physical-Flooding	Other: reduced production	Gold Fields' operations in Australia are exposed to high rainfall and the risk of pit flooding. During 2014, flooding of the St Ives' Neptune Pit was experienced at the Australian operation. St Ives is situated within Western Australia,	Current-up to 1 year	Probable	Low	Other: increased focus on water management and weather monitoring	The cost of the water management strategy is managed in house. Implementation of flood bunds and improvement of access roads at St Ives cost about US$ 195,500.	In 2014 the Australian region implemented a new water management strategy to support the integration of the Yilgarn South Assets. The strategy was based on sound water management planning and practices as well as measurement and reporting of the water impacts of each

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				where heavy rainfall is often associated with cyclone events. No financial or production delays were experienced in 2014 due to increased rainfall or flooding. High rainfall also exposes the Australian operations to supply chain disruptions as the operations can become isolated due to wet road conditions						operation and the associated mitigation measures. This strategy assisted Australian operations to manage wet road conditions on site and reduce supply chain disruptions. Gold Fields Australian operations actively monitor weather data and cyclone developments through the Australian Government Bureau of Meteorology. Operations are commonly warned a few days prior to the predicted cyclone event to allow for adequate

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										planning. Each operation has flood management plans in place, especially at St Ives (partly a surface mine) where flood bunds are installed on new pits to prevent future delays. St Ives also has spare mill capacity, which allows for quicker production catch up after delayed production.
Ghana	Other: Ankobra	Other: increased water balances which lead to an increase in potentially discharging water	Other: increased operational costs	Gold Fields' Ghanaian operations – and Tarkwa in particular – face a number of challenges with respect to water management	Current-up to 1 year	Probable	Medium	Infrastructure investment	The cost of the two RO treatment plants implemented at the Tarkwa operation was US$ 28 million.	To manage flooding at the Ghanaian operations rainfall is stored at Damang in the Lima pit and is then passed through the RO plant before being

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				, including: • Intense periods of precipitation, particularly during southern Ghana's two rainy seasons (March to July and September to November) which increases inflow into the Volta River, which has an impact of Ghana's hydropower. • The significant footprint of the Tarkwa mine, meaning that there is a large watershed to manage						discharged. Water treatment costs roughly US$ 2 million per year.

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
South Africa	Orange	Regulatory-Increased difficulty in obtaining withdrawals/operations permit	Higher operating costs	Conditions to renew or obtain new water use licenses have become stricter in certain operating jurisdictions.	>6 years	Probable	High	Engagement with public policy makers	The cost related to engaging with local policy makers is managed in house by each operation. Gold Fields' invested US$ 1.2 million during 2014 related to improving the water system for the Hualgayoc region in Peru.	Gold Fields' manages this risk by: ☐ striving to comply with all applicable water regulations; ☐ supporting host communities with safe access to water (water related projects specifically in Peru costing roughly US$1.2 million); and ☐ demonstrating their commitment to being a good water steward.
Peru	Other: Tingo	Regulatory-Increased difficulty in obtaining withdrawals/operations permit	Higher operating costs	Conditions to renew or obtain new water use licenses have become stricter in certain operating	>6 years	Probable	High	Engagement with public policy makers	The cost related to engaging with local policy makers is managed in house by each operation. Gold Fields'	Gold Fields' manages this risk by: - striving to comply with all applicable water regulations; - supporting host communities

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				jurisdictions.					invested US$ 1.2 million during 2014 related to improving the water system for the Hualgayoc region in Peru.	with safe access to water (water related projects specifically in Peru costing roughly US$1.2 million); and - demonstrating their commitment to being a good water steward.
Ghana	Other: Ankobra	Regulatory-Increased difficulty in obtaining withdrawals/operations permit	Higher operating costs	Conditions to renew or obtain new water use licenses have become stricter in certain operating jurisdictions.	>6 years	Probable	High	Engagement with public policy makers	The cost related to engaging with local policy makers is managed in house by each operation. Gold Fields' invested US$ 1.2 million during 2014 related to improving the water system for the Hualgayoc region in Peru.	Gold Fields' manages this risk by: - striving to comply with all applicable water regulations; - supporting host communities with safe access to water (water related projects specifically in Peru costing roughly US$1.2 million); and - demonstrating their

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										commitment to being a good water steward.
Australia	Other: Western Plateau	Regulatory-Increased difficulty in obtaining withdrawals/operations permit	Higher operating costs	Conditions to renew or obtain new water use licenses have become stricter in certain operating jurisdictions.	>6 years	Probable	High	Engagement with public policy makers	The cost related to engaging with local policy makers is managed in house by each operation. Gold Fields' invested US$ 1.2 million during 2014 related to improving the water system for the Hualgayoc region in Peru.	Gold Fields' manages this risk by: - striving to comply with all applicable water regulations; - supporting host communities with safe access to water (water related projects specifically in Peru costing roughly US$1.2 million); and - demonstrating their commitment to being a good water steward.

W3.2d

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	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
South Africa	Orange	Physical-Increased water stress	Higher operating costs	The following products are currently obtained from water stressed regions and are water intensive to produce: - Municipal Water - Electricity - Diesel - Cyanide Increased water stress could interrupt production, which would directly affect Gold Fields. Alternative suppliers/sources may need to be identified which could increase Gold Fields' operational costs. For example in South Africa, Eskom (National Electricity Supplier) uses approximately 1.35 litres of water for every kilowatt hour produced.	1-3 years	Probable	Low-medium	Other: reduced reliability on products (such as water) and supplier diversification	No Capital costs associated with the installation of the reverse osmosis plants. In fact this strategy has been designed to save costs	Gold Fields' South Deep conducted a comprehensive review of water management issues at the mine and implemented a number of water stewardship initiatives as part of the mine's water management plan costing around US$ 2 million. One of the key initiatives included was the implementation of two Reverse Osmosis treatment plants. This project uses two RO plants, installed in 2014, to purify surplus fissure and mineralised service water to a potable standard. This is then reused by the

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										mine. In 2014 the amount of water treated by the RO plants improved from 8Mℓ/month in January to 40Mℓ/month in December. In 2015 it is envisaged that the RO plant capacity at South Deep will increase to about 150Mℓ/month. This approach: □ cuts the mine's water purchase costs by an estimated R300,000/month from July 2015; □ increases overall supply for other local water users; and □ r the overall amount of water in the mine's water system – reducing the risk of overflows from the mine's dams during periods of heavy rain. In addition to this

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										Gold Fields' South Deep has recently started implementing a supplier engagement programme. The programme currently focuses on carbon management, but the mine aims to engage with suppliers on water issues in the future. The success of supplier engagement at South Deep, will determine whether the programme will be rolled out to the rest of Gold Fields' operations.
Ghana	Volta	Physical-Increased water scarcity Physical-Increased water stress	Higher operating costs	Seasonal fluctuations in rainfall, can also disrupt hydroelectric power generation in Ghana. To address the current load-shedding	Current-up to 1 year	Probable	Medium-high	Increased capital expenditure Supplier diversification	In 2012 operational costs increased from an average US$0.17/kWh to US$0.42/kWh. However since	In the medium to long term Gold Fields has entered into a 10-year PPA with independent US-based power producer Genser Energy. Under the

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				requirements in Ghana, both Tarkwa and Damang initiated a number of actions: • Securing additional surplus power (5 – 7MW) from Unilever • Making more extensive use of generators, amid lower diesel prices • Implementing a load-shedding schedule to optimise power consumption					the PPA with Genser, an agreed tariff of US$c 0.135/KWH will be charged until the end of 2017, following which a tariff of US$c 0.10/KWh will be used for a fixed period of five years.	PPA, Genser will commission a near-site clean coal power-generation facility at Tarkwa in 2016. The delivery of power will begin in Q2 2015 from an alternative Genser plant while the new facility is being completed. It will eventually replace all or a significant proportion of Tarkwa and Damang's current supply from the VRA and ECG. During the first two years of operation, Genser will supply 51MW of power, representing Gold Fields' total electricity demand in Ghana. Over the 10-year contract, the PPA could potentially save around 47% on the cost of

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										power currently supplied. The PPA will, however, increase the Ghanaian operation’s carbon emissions, by replacing electricity currently generated through hydropower with coal-generated electricity.

W3.2e

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your direct operations that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain

W3.2f

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your supply chain that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain

W3.2g

Please choose the option that best explains why you do not know if your organization is exposed to water risks that could generate a substantive change in your business operations, revenue or expenditure and discuss any future plans you have to assess this

Primary reason	Future plans

Further Information

Page: W4. Water Opportunities

W4.1

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

Yes

W4.1a

Please describe the opportunities water presents to your organization and your strategies to realize them

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
Company-wide	Other: Reduced mine closure liability due to good water management practices	Good water management practices are expected to reduce mine closure liability. Gold Fields' Corporate Water Management Guideline aims to pursue zero harm through sound water management practices, as well as creating shared value. Leaving an enduring, positive legacy, requires active management to be applied to each of the stages of the mining life-cycles, of which the last two are closure and post-closure. The Corporate Water Management Guideline is 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.	>6 years	
Company-wide	Cost savings	Reduced water usage will reduce operational costs. The strategy to realise this opportunity begins with the highest level of strategic guidance - the Corporate Water Management Guideline which is translated into mine specific plans and strategies. Any water efficiency and water recycling projects, as well as on-site water treatment projects are part of the strategy to reduce water use/purchases and save costs. Gold Fields' South Deep conducted a comprehensive review of water management issues at the mine and implemented a number of water stewardship initiatives as part of the mine's water management plan costing around US$ 2 million. A key initiatives included was the implementation of two Reverse Osmosis treatment plants. This project uses two RO plants to purify surplus fissure and mineralised service water to a potable standard. This is then reused by the mine. In 2014 the amount of water treated by the RO plants improved from 8Mℓ/month in January to 40Mℓ/month in December. In 2015 it is envisaged that the RO plant capacity at South Deep will increase to about 150M ℓ R300,000/month from July 2015 affecting some of the electricity requirements of the RO treatment plants; □ overall amount of water in the mine's water system – reducing the risk of overflows from the mine's dams during periods of heavy rain.	Current-up to 1 year	

W4.1b

Please choose the option that best explains why water does not present your organization with any opportunities that have the potential to provide substantive benefit

Primary reason	Please explain

W4.1c

Please choose the option that best explains why you do not know if water presents your organization with any opportunities that have the potential to provide substantive benefit

Primary reason	Please explain

Further Information

Module: Accounting

Page: W5. Facility Level Water Accounting (I)

W5.1

Water withdrawals: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 1	South Africa	Orange	South Deep	2225.52	Lower	The 34% decrease in total water withdrawals resulted from a reduction in ground water withdrawal and a reduction in municipal water withdrawal. The reduction in municipal water withdrawal was due to the Reverse Osmosis Water Treatment plant at South Deep, which enables the mine to re-use process water and to treat the underground fissure water to a potable standard.
Facility 2	Ghana	Other: Ankobra	Damang	1390.11	Lower	The 33% decrease in total water withdrawals resulted from reduced withdrawal figures of 15% in surface water withdrawal and 67% in renewable ground water withdrawal. The reduction could be attributed to the shift in operational focus at the Damang operation on lower volume and higher margin mining and processing. The production levels were maximised by reducing dilution.
Facility 3	Ghana	Other: Ankobra	Tarkwa	3500.59	Much lower	The 44% decrease in total water withdrawals at the Tarkwa operation resulted from decreased withdrawal figures of 48%, 24% and 49% for surface water, renewable ground water and municipal water respectively. The decreased withdrawals are attributed to the decommissioning of all heap leach activities which drastically reduced the required water during 2014.
Facility 4	Australia	Other: Western Plateau	St Ives	9571.38	Lower	The 33% decrease in total water withdrawals at the St Ives operation resulted from reduced withdrawal figures for renewable ground water and municipal water. The reductions amounted to 36% in renewable ground water use and 7% in municipal water use. The reductions could be attributed to reduced pit dewatering which reduced the withdrawal of renewable groundwater. In addition a new water management strategy reduced water withdrawals across all sources.
Facility 5	Australia	Other: Western Plateau	Agnew	1572.81	Much higher	The 96% increase in renewable ground water withdrawals resulted from the merger of the newly acquired Lawlers mining operation with that of Agnew. The Lawlers processing plant was closed and processing of the ore mined at Lawlers was

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain the change if substantive
						conducted at the Agnew facility. This resulted in a larger quantity of renewable ground water being withdrawn to process the increased amount of ore at the Agnew processing facility.
Facility 6	Peru	Other: Tingo	Cerro Corona	3561.13	About the same	The 2% decrease in total water withdrawals at Cerro Corona operation resulted from a 31% decrease in renewable ground water withdrawals in the reporting period due to improved water management procedures and enhanced rain water storage and re-use in the Cerro Corona Internal circuit. A decreased withdrawal volume was recorded in this reporting year even though the surface water withdrawals increased by 29%.
Facility 7	Australia	Other: Western Plateau	Darlot	542.07	This is our first year of measurement	This is the first year that Gold Fields' will report on Darlot in the WDP. This is due to the fact that Darlot was only acquired in October 2013.
Facility 8	Australia	Other: Western Plateau	Granny Smith	7843.14	This is our first year of measurement	This is the first year that Gold Fields' will report on Granny Smith in the WDP. This is due to the fact that Granny Smith was only acquired in October 2013.

Further Information

Page: W5. Facility Level Water Accounting (II)

W5.1a

Water withdrawals: for the reporting year, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.1

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 1	0	0	0	368.82	0	0	1856.7	0	The 65% reduction in renewable ground water withdrawal and 20% reduction in municipal water was due to: The Reverse Osmosis Water Treatment plant at South Deep, which enables the mine to recycle process water.
Facility 2	1159.08	0	0	231.03	0	0	0	0	The 15% reduction in surface water use and 67% reduction in renewable ground water use resulted from an operational focus shift at the Damang operation. The production levels were maximised by reducing dilution.
Facility 3	2681.51	0	0	795.81	0	0	23.27	0	The 48% reduction in surface water use and 24% reduction in renewable ground water use resulted from: The decommissioning of the heap leaching facilities; and Rainwater that falls onto the

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
									decommissioned heap leaches is captured, treated by the RO plant and discharged. Originally this water would have been put back through the mining circuit to assist with the heap leaching process.
Facility 4	851.71	0	0	8106.49	0	0	613.18	0	The 36% reduction in renewable ground water withdrawal and the 7% reduction in municipal water withdrawal at St Ives during 2014 was due to: The new water management strategy implemented for Australian operations during 2014; and ☐ The decrease in pit dewatering and more efficient dilution processes.
Facility 5	0	0	0	1572.81	0	0	0	0	The 96% increase in renewable ground water use at Agnew was due to the transfer of ore processing from the neighbouring Lawlers operation. The Lawlers processing plant was placed into

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
									care and maintenance and the Agnew processing plant therefore conducted all ore processing for the Agnew and Lawlers mines. The increased processing resulted in increased renewable ground water use.
Facility 6	2288.90	0	0	1272.23	0	0	0	0	The 31% reduction in renewable ground water for 2014 is attributed to improved water management procedures and enhanced rain water storage and re-use in the Cerro Corona Internal circuit. A net reduction in withdrawals at Cerro Corona was recorded even though the fresh surface water withdrawal increased by 29% in this reporting year.
Facility 7	0	0	0	542.07	0	0	0	0	This is the first year in which Darlot will be reported on in the WDP, therefore a comparison cannot be made with the previous year’s performance.

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 8	931.25	0	0	6910.3	0	0	1.6	0	This is the first year in which Granny Smith will be reported on in the WDP, therefore a comparison cannot be made with the previous year's performance.

W5.2

Water discharge: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain the change if substantive
Facility 1	231.51	Lower	South Deep only has one discharge point, where it discharges treated sewage effluent in accordance with its license.
Facility 2	0	Lower	In 2013 Damang discharged water into a fresh surface water source due to excessive rainfall. However in 2014 Damang had sufficient storage capacity within the Lima pit to store all water withdrawn and rainwater, therefore no water was discharged. Damang re-uses this water by means of the reverse osmosis plant at the facility.
Facility 3	3531.23	Much higher	Higher rainfall during the months of June, July and August required more water to be discharged from the Tarkwa pit to maintain safe operating conditions. Secondly, all heap leach activities were decommissioned at the mine during 2014. Water which was originally recycled from the heap leach areas is now treated and discharged to the fresh surface water sources. This lead to a significant

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain the change if substantive
			increase in discharge volumes during the current reporting period.
Facility 4	0	About the same	St Ives is a closed water system and therefore no water is discharged (Small quantities of water is discharged into Lake Lefroy, via seepage dams. However Lake Lefroy falls within the operation's boundaries).
Facility 5	0	About the same	Agnew is a closed water system and therefore no water is discharged.
Facility 6	1824.99	Higher	The increased discharge volume in the current reporting period resulted from increased discharge to the Mesa de Plata Creek. The increase could be attributed to high rainfall which increased the amount of treated runoff from the sediment pond being discharged to the creek.
Facility 7	0	This is our first year of measurement	This is the first year in which Darlot will be reported on in the WDP, therefore a comparison cannot be made with the previous year's performance.
Facility 8	5955.08	This is our first year of measurement	This is the first year in which Granny Smith will be reported on in the WDP, therefore a comparison cannot be made with the previous year's performance.

W5.2a

Water discharge: for the reporting year, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.2

Facility reference number	Fresh surface water	Municipal Treatment Plant	Seawater	Groundwater	Comment
Facility 1	231.51	0	0	0	South Deep is required by local regulations to discharge treated sewage effluent to the required standard (as per license conditions) from the onsite sewage plant.
Facility 2	0	0	0	0	Damang does not discharge water as all water is re-used by the operation. The water re-use is facilitated by a reverse osmosis plant which treats all water after it has been used in processing. In the event that excessive rainfall causes insufficient storage

Facility reference number	Fresh surface water	Municipal Treatment Plant	Seawater	Groundwater	Comment
					capacity, water is discharged to the fresh water rivers: Huni and Bonsa in accordance with Ghanain water quality standards.
Facility 3	3531.23	0	0	0	Tarkwa has two fresh surface water discharge points: The North Suman river and the South Awunaben river.
Facility 4	0	0	0	0	St Ives operation has a closed water circuit, therefore no water is discharged.
Facility 5	0	0	0	0	Agnew operates with a closed water circuit which results in zero water discharge at their operation.
Facility 6	1824.99	0	0	0	Cerro Corona discharges water in two fresh surface water sources: The Tingo river and the Mesa de Plata Creek. Discharge of treated water from the tailings facility is sent to the Tingo river while discharge of the treated runoff from the sediment pond and the Arpon domestic water treatment plant are sent to the Mesa de Plata Creek.
Facility 7	0	0	0	0	Darlot operates with a closed water circuit which results in zero water discharge from the operation.
Facility 8	5955.08	0	0	0	Water discharged from the Granny Smith operation is sent to Lake Carey at two different discharge points. The lake is a naturally saline water body.

W5.3

Water consumption: for the reporting year, please provide water consumption data for all facilities reported in W3.2a

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain the change if substantive
Facility 1	1994	Lower	A 35% decrease in water consumption was recorded during the current financial year as a result of production being ceased for 4 months to do safety critical ground support remediation. In addition the installation of reverse osmosis (RO) plants decreased the overall water discharge at the mine which in turn reduced the overall consumption.

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain the change if substantive
Facility 2	1390.11	Lower	A 23% decrease in water consumption was recorded during the current financial year as a result of an operational focus on lower volume and higher margin mining and processing.
Facility 3	350.59	Much lower	A 40% decrease in water consumption at Tarkwa could be attributed to the decommissioning of all heap leach activities.
Facility 4	9571.38	Lower	A 33% decrease in water consumption for 2014 was a result of less water being withdrawn. The 33% reduction in water withdrawals can be attributed to more efficient dilution processes, a decrease in pit dewatering and a new water management strategy.
Facility 5	1572.81	Much higher	A 96% increase in water consumption was recorded during the current financial year as a result of the closed water circuit at the Agnew operation. The 96% increase in water withdrawal resulted from the addition of the Lawlers ore processing plant.
Facility 6	1736.14	Lower	A 15% decrease in water consumption was recorded during the current financial year as a result of less water withdrawals. The reduced withdrawals resulted from rainwater storage and re-use in the internal mining circuit.
Facility 7	542.07	This is our first year of measurement	This is the first year in which Darlot will be reported on in the WDP, therefore a comparison cannot be made with the previous year's performance.
Facility 8	1888.06	This is our first year of measurement	This is the first year in which Granny Smith will be reported on in the WDP, therefore a comparison cannot be made with the previous year's performance.

W5.4

For all facilities reported in W3.2a what proportion of their water accounting data has been externally verified?

Water aspect	% verification	What standard and methodology was used?
Water withdrawals- total volumes	76-100	The standard used: ISAE 3000 The methodology: KPMG's internal Sustainability Assurance Methodology The scope of methodology: KPMG assesses the risk environment of the process being reviewed as well as the controls in place. Based on these the procedures are determined.

Water aspect	% verification	What standard and methodology was used?
Water withdrawals- volume by sources	Not verified	Water withdrawals by sources is not a commonly requested indicator, apart from in the WDP. For this reason it is not verified. Gold Fields has identified that the most material water parameter to their key stakeholders is withdrawal.
Water discharges- total volumes	Not verified	Four out of the eight Gold Fields' operations discharge water. The Damang, St Ives, Agnew and Darlot operations are closed circuit systems; while the South Deep, Tarkwa, Peru and Granny Smith operations do discharge. This parameter is not assured as in the cases where discharges occur, they are monitored in accordance with Gold Fields licencing conditions (quality and volume).Gold Fields has identified that the most material water parameter to their key stakeholders is withdrawal.
Water discharges- volume by destination	Not verified	Four out of the eight Gold Fields' operations discharge water. The Damang, St Ives, Agnew and Darlot operations are closed circuit systems; while the South Deep, Tarkwa, Peru and Granny Smith operations do discharge. This parameter is not assured as in the cases where discharges occur, they are monitored in accordance with Gold Fields licencing conditions (quality and volume).Gold Fields has identified that the most material water parameter to their key stakeholders is withdrawal.
Water discharges- volume by treatment method	Not verified	Four out of the eight Gold Fields' operations discharge water. The Damang, St Ives, Agnew and Darlot operations are closed circuit systems; while the South Deep, Tarkwa, Peru and Granny Smith operations do discharge. This parameter is not assured as in the cases where discharges occur, they are monitored in accordance with Gold Fields licencing conditions (quality and volume). Gold Fields has identified that the most material water parameter to their key stakeholders is withdrawal.
Water discharge quality data- quality by standard effluent parameters	Not verified	. Environmental incidents (level 3 and above) are assured by KPMG (in accordance with the ISAE 3000 Standard). Any significant exceedance of water quality discharge requirements would be recorded as an environmental incident. A description of all level 3 and above environmental incidents, including the mitigation measures to address the incident are recorded in Gold Fields Integrated Annual Report.
Water consumption- total volume	Not verified	Water withdrawal (which is assured by KPMG) includes water consumption volumes. Gold Fields has identified that the most material water parameter to their key stakeholders is withdrawal.

Further Information

Module: Response

Page: W6. Governance and Strategy

W6.1

Who has the highest level of direct responsibility for water within your organization 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 committee appointed by the Board	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 and legally responsible for water related impacts. Therefore Gold Field's CEO and Directors hold the highest level of direct responsibility for water within the company.

W6.2

Is water management integrated into your business strategy?

Yes

W6.2a

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 costs down	As part of the Corporate Water Management Guideline requirements, Gold Fields' 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. For example Gold Fields' South African operation, South Deep installed two RO plants during 2014 which cuts the mine's water purchased costs by an estimated US$ 25,000/month from July 2015. Enhanced water re-use, recycling and conversation practices have also been included in the group balanced scorecard for 2015 to both reduce costs and to enhance both Gold Fields Licence and Social License to operate
Other: Increased shared value	Shared Value is integrated into Gold Fields business strategy. It is created when companies take a proactive role in simultaneously addressing business and social needs. Shared value was introduced to Gold Fields' business in 2012. Gold Fields' facilitates collaboration between multiple stakeholders to solve environmental issues such as water security, which have been identified as a community priority. This benefits Gold Fields social license to operate and reduces the risk of disruptions initiated by local communities. For example, during 2014, Gold Fields' focused on improving water quality and access in Hualgayoc City through: ☐ the construction from a well at Cerro Corona, and ☐ a programme to identify and repair water activities (not associated with Gold Fields) that are contaminating a local stream.

W6.2b

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

Influence of water on business strategy	Please explain
Increased capital expenditure	Installation of capital intensive water treatment options to meet in country discharge requirements has led to increase capital and operational expenditure. The most capital intensive precautionary measures installed were the RO Plants in Ghana. The RO plants implemented at Ghana cost US$ 28 million.

W6.2c

Please choose the option that best explains why your organization does not integrate water management into its business strategy and discuss any future plans to do so

Primary reason	Please explain

W6.3

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

Yes

W6.3a

Please select the content that best describes your water policy (tick all that apply)

Content	Please explain why this content is included
Company-wide Incorporated within group environmental, sustainabiilty or EHS policy Other: Performance guidance for direct operations, Uphold human rights	Gold Fields' 'Environmental and Sustainable Development Policy' refers to environmental stewardship as per ISO 14001, which also covers water. Gold Fields water policy, is integrated into the 'Environmental and Sustainable Development Policy.' The environmental and sustainable development policy is supported by a group water management guideline. The policy is implemented through the guideline. Gold Fields' is committed to responsible water stewardship and security. Water is entrenched through our Sustainable development framework of 10 Policies and is specifically implemented through the group water management guideline which is aligned with the SD framework.

W6.4

How does your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting period compare to the previous reporting period?

Water CAPEX (+/- % change)	Water OPEX (+/- % change)	Motivation for these changes
		Water CAPEX and OPEX figures are difficult to extract because they are integrated into Gold Fields' mine capital operating expenses.

Further Information

Page: W7. Compliance

W7.1

Was your organization subject to any penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting year?

No

W7.1a

Please describe the penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations and your plans for resolving them

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution

W7.1b

What proportion of your total facilities/operations are associated with the incidents listed in W7.1a

W7.1c

Please indicate the total financial impacts of all incidents reported in W7.1a as a proportion of total operating expenditure (OPEX) for the reporting year. Please also provide a comparison of this proportion compared to the previous reporting year

Impact as % of OPEX	Comparison to last year

Further Information

Page: W8. Targets and Initiatives

W8.1

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

Yes, targets and goals

W8.1a

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

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base-line year	Target year	Proportion of target achieved, % value
Other: Development and Implementation of Water Management Action Plans	Water stewardship	The target is an updated water plan for each operation. All operations are required to develop updated Water Management Action Plans in line with the Group Water Management Guideline by the end of 2015. During 2014, several operations developed updated Water Management Action Plans. The deadline for the remaining operations to develop and submit the plans is the end of 2015. The performance of each operation in this regard will be assessed when conformance with the group water management guideline is measured before the end of 2015.	Other: 100% of operations are required to develop and implement Water Management Action Plans.	2013	2015	50%
Other: Conformance across the group to the Water Management Guideline	Water stewardship	In 2014 Gold Fields implemented a Group water management guideline with a focus on water stewardship, which includes identifying opportunities to enhance water reuse, recycling and conservation practices at all Gold Fields operations. This remains a key group objective for 2015 and beyond - enhancement of these practices can deliver multiple benefits including cost savings, reduced impact in water scarce areas, improved regulatory compliance and enhancing Gold Fields' social licence to operate. Regional application of the new Corporate Water Management Guideline is required by the end of 2015.	Other: 100% of operations are required to conform to the Water Management Guideline	2014	2015	0%
Other: 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 2014, Gold Fields' South Deep experienced four level 3 environmental incidents. Gold	Other: Decrease in level 3 environmental incidents	2013	2014	0%

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base-line year	Target year	Proportion of target achieved, % value
		Fields target was to reduce level 3 environmental incidents between 2013 and 2014. This was especially for water related incidents which made up the majority of level 3 incidents at South Deep in 2013. Although the target was not met, since the commencement of the implementation of the South Deep Water Management Action Plan, there have been no level 3 incidents between July 2014 and the end of June 2015.				

W8.1b

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

Goal	Motivation	Description of goal	Progress
Other: Strive for zero harm	Other: 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 strive for 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 significant environmental fines were received in 2014, which is a measure of progress made towards the goal of striving for zero harm. Robust ground and surface water monitoring programmes are implemented throughout the group. The quality of water discharges is managed through Reverse Osmosis plant treatment at Tarkwa and Damang. In Peru, local community members are invited to accompany Gold Fields' employees when conducting water testing at the Cerro Corona operation. In

Goal	Motivation	Description of goal	Progress
			addition the operation continued with the implemented of the following water related shared value project: ☐ Remediating legacy mining activities (not associated with Gold Fields) that are contaminating a local stream.
Other: Build strong relationships of trust and enhance social license to operate	Other: Maintain social licence to operate	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 evaluates opportunities to supply clean water to host communities where possible.	In 2014 Gold Fields' Cerro Corona operation implemented the following initiatives: ☐ im water quality and access in Hualgayoc City through the construction of a water pipeline from a well at Cerro Corona; ☐ and repair water leaks in the existing water infrastructure; and ☐ Rem activities (not associated with Gold Fields) that are contaminating a local stream. These projects aim to enhance the relationship between the Cerro Corona mine and the local communities, while strengthening the mine's social license to operate.
Other: Engagement with peers and policy makers to advance sustainable water policies and management practices	Other: • 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) which has recently published the ICMM water stewardship framework, which Gold Fields and other members contributed to the development of the stewardship framework	The ICMM water stewardship framework was published in April 2014. Gold Fields is also an active participant in Water related issues in South Africa through its membership of the Chamber of Mines.

W8.1c

Please explain why you do not have any water-related targets or goals and discuss any plans to develop these in the future

Further Information

Module: Linkages/Tradeoff

Page: W9. Managing trade-offs between water and other environmental issues

W9.1

Has your organization identified any linkages or trade-offs between water and other environmental issues in its value chain?

Yes

W9.1a

Please describe the linkages or trade-offs and the related management policy or action

Environmental issues	Linkage or trade-off	Policy or action
1. Water management: During 2014, South Deep experienced three level 3 water related environmental incidents: ☐ pollutio overflow; ☐ unau seepage at the Doorpost return water dam. 2. Emissions management: The South Deep mine is still in development and as such has yet to set emission reduction targets. As production ramps up it is likely that emissions will increase by a compound annual growth rate of 4% from 2013 to 2016.	Trade-off	Treatment of water increases electricity consumption and related emissions. To reduce environmental incidents Gold Fields' South Deep conducted a comprehensive review of water management issues at the mine and implemented a number of water stewardship initiatives as part of the mine's water management plan which cost around US$ 2 million in 2014. A key initiatives included installation of two Reverse Osmosis treatment plants to purify surplus fissure and mineralised service water to a potable standard for reuse in the the mine. In 2014 the amount of water treated by the RO plants improved from 8Mℓ/month in January to 40Mℓ/month in December. In 2015 it is envisaged that the RO plant capacity at South Deep will increase to 150Mℓ/month. This approach: cuts the mine's water purchase costs by an estimated R300,000/month from July 2015; increases supply for other local water users; and Reduces the amount of water in the mine's water system – reducing the risk of

Environmental issues	Linkage or trade-off	Policy or action
		overflows from the mine's dams during periods of heavy rain. However the RO plants are energy intensive and increase South Deep's electricity consumption. As water costs are reduced and water management is improved, the emissions of the mine increase. Gold Fields' aims to manage this trade-off by working towards setting an emissions reduction target and investigating renewable energy options as part of the mines energy mix. The latter forms part of the broader strategy for South Deeps Energy Security.

Further Information

Module: Sign Off

Page: Sign Off

W10.1

Please provide the following information for the person that has signed off (approved) your CDP water response

Name	Job title	Corresponding job category
Naseem Cohan	Executive Vice President of Sustainable Development	Other: Executive Vice President

W10.2

Addressing water risks effectively, in many instances, requires collective action. CDP would like to support you in finding potential partners that are also working to tackle water challenges in the river basins you report against. Please select if your organization would like CDP to transfer your publicly disclosed risk and impact drivers and response strategy data from questions W1.4a, W3.2b, W3.2c, W4.1a and W8.1b to the United Nations Global Compact Water Action Hub.

Yes

Further Information

CDP