



GRSG 2024

Leveraging Remote Sensing for Flood Risk Management in Shell

Blancart Emilie
Geomatics Consultant
Shell Global Solutions International B.V.

Definitions & cautionary note

Cautionary Note

The companies in which Shell plc directly and indirectly owns investments are separate legal entities. In this presentation “Shell”, “Shell Group” and “Group” are sometimes used for convenience where references are made to Shell plc and its subsidiaries in general. Likewise, the words “we”, “us” and “our” are also used to refer to Shell plc and its subsidiaries in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. “Subsidiaries”, “Shell subsidiaries” and “Shell companies” as used in this presentation refer to entities over which Shell plc either directly or indirectly has control. The term “joint venture”, “joint operations”, “joint arrangements”, and “associates” may also be used to refer to a commercial arrangement in which Shell has a direct or indirect ownership interest with one or more parties. The term “Shell interest” is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

Forward-Looking Statements

This presentation contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management’s current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Shell to market risks and statements expressing management’s expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as “aim”; “ambition”; “anticipate”; “believe”; “commit”; “commitment”; “could”; “estimate”; “expect”; “goals”; “intend”; “may”; “milestones”; “objectives”; “outlook”; “plan”; “probably”; “project”; “risks”; “schedule”; “seek”; “should”; “target”; “will”; “would” and similar terms and phrases. There are a number of factors that could affect the future operations of Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this presentation, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell’s products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, judicial, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; (m) risks associated with the impact of pandemics, such as the COVID-19 (coronavirus) outbreak, regional conflicts, such as the Russia-Ukraine war, and a significant cybersecurity breach; and (n) changes in trading conditions. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this presentation are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Shell plc’s Form 20-F for the year ended December 31, 2023 (available at www.shell.com/investors/news_and_filings/sec_filings.html and www.sec.gov). These risk factors also expressly qualify all forward-looking statements contained in this presentation and should be considered by the reader. Each forward-looking statement speaks only as of the date of this presentation, **December 1st 2024**. Neither Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this presentation.

Shell's Net Carbon Intensity

Also, in this presentation we may refer to Shell’s “Net Carbon Intensity” (NCI), which includes Shell’s carbon emissions from the production of our energy products, our suppliers’ carbon emissions in supplying energy for that production and our customers’ carbon emissions associated with their use of the energy products we sell. Shell’s NCI also includes the emissions associated with the production and use of energy products produced by others which Shell purchases for resale. Shell only controls its own emissions. The use of the terms Shell’s “Net Carbon Intensity” or NCI are for convenience only and not intended to suggest these emissions are those of Shell plc or its subsidiaries.

Shell's net-zero emissions target

Shell’s operating plan, outlook and budgets are forecasted for a ten-year period and are updated every year. They reflect the current economic environment and what we can reasonably expect to see over the next ten years. Accordingly, they reflect our Scope 1, Scope 2 and NCI targets over the next ten years. However, Shell’s operating plans cannot reflect our 2050 net-zero emissions target, as this target is currently outside our planning period. In the future, as society moves towards net-zero emissions, we expect Shell’s operating plans to reflect this movement. However, if society is not net zero in 2050, as of today, there would be significant risk that Shell may not meet this target.

Forward-Looking non-GAAP measures

This presentation may contain certain forward-looking non-GAAP measures such as cash capital expenditure and divestments. We are unable to provide a reconciliation of these forward-looking non-GAAP measures to the most comparable GAAP financial measures because certain information needed to reconcile those non-GAAP measures to the most comparable GAAP financial measures is dependent on future events some of which are outside the control of Shell, such as oil and gas prices, interest rates and exchange rates. Moreover, estimating such GAAP measures with the required precision necessary to provide a meaningful reconciliation is extremely difficult and could not be accomplished without unreasonable effort. Non-GAAP measures in respect of future periods which cannot be reconciled to the most comparable GAAP financial measure are calculated in a manner which is consistent with the accounting policies applied in Shell plc’s consolidated financial statements.

The contents of websites referred to in this presentation do not form part of this presentation.

We may have used certain terms, such as resources, in this presentation that the United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov.

Shell at a glance

Our people

103,000 employees as of December 31, 2023

>70 countries in which we operate

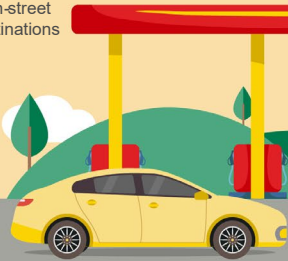
32% women senior leaders



We are the world's largest mobility retailer by number of sites

c.33 million customers at **>47,000** retail stations daily

>54,000 public EV charge points at Shell stations, on-street and at destinations



We are providing our customers with the energy they need for today and tomorrow

67 million tonnes of liquefied natural gas (LNG) sold in 2023

279 TWh of power sold in 2023



9.7 billion litres of biofuels used in our fuels in 2023

2,791 kboe /d produced oil and gas available for sale in 2023

\$628 million spent on Research and Development projects in 2023 that contributed to decarbonisation

We are making progress towards net -zero

6.3% reduction in the net carbon intensity of the energy products we sell by the end of 2023, compared with 2016, achieving our 2023 target

\$5.6 billion invested in low-carbon energy solutions and **\$2.3 billion** in non-energy products in 2023

31% reduction in carbon emissions from our operations by the end of 2023 compared with 2016

We help to power lives and respect nature

20+ years of collaboration with global environmental partners

\$128.3 million spent on voluntary social investment in 2023

c.25,000 people supported by our skills development and entrepreneurship programmes in 2023

>120,000 Flagship STEM Programme participants in 2023

27 years of transparency on sustainability reporting achieved with our 2023 report

295,000 training days for Shell employees and joint-venture partners

Core values of honesty, integrity and respect for people and a relentless focus on safety

c.3,400 flight hours safely completed by remotely piloted aircraft on surveys, inspections, emissions surveillance, and security and incident response

4 large-scale emergency response exercises held in 2023 for assets we operate in Trinidad and Tobago, Singapore, the UK and the USA

>900 risk assessments carried out for products and additives



We deliver strong financial returns for investors and make a strong global economic contribution

\$23 billion Shareholder distributions in 2023

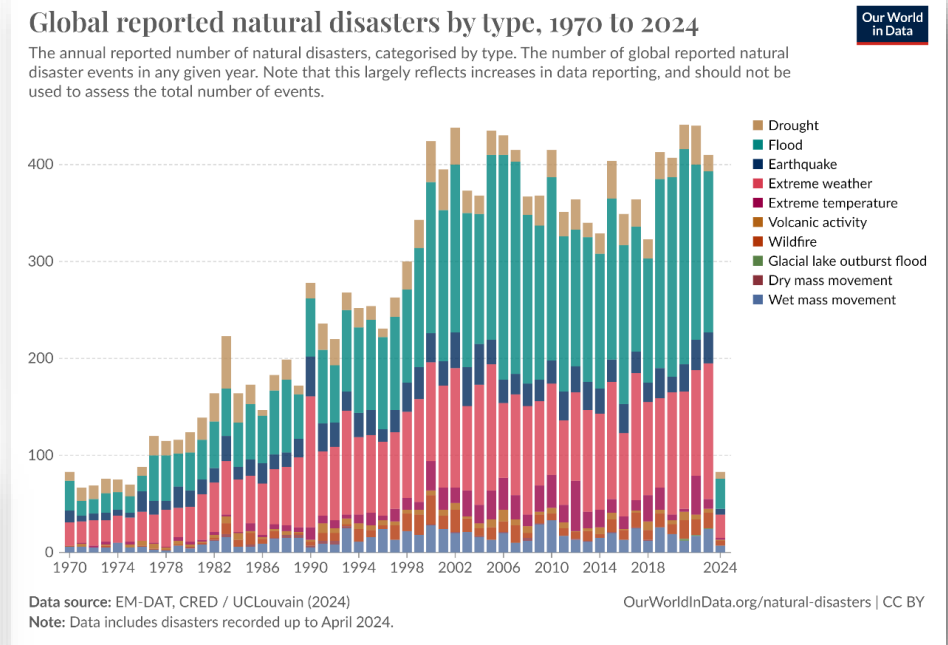
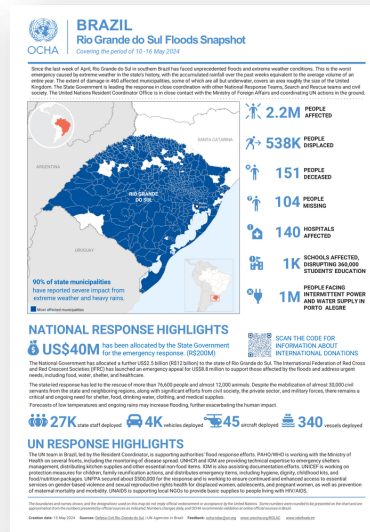
\$67 billion in tax paid to and collected on behalf of governments in 2023

>\$19 billion income attributable to Shell plc shareholders in 2023

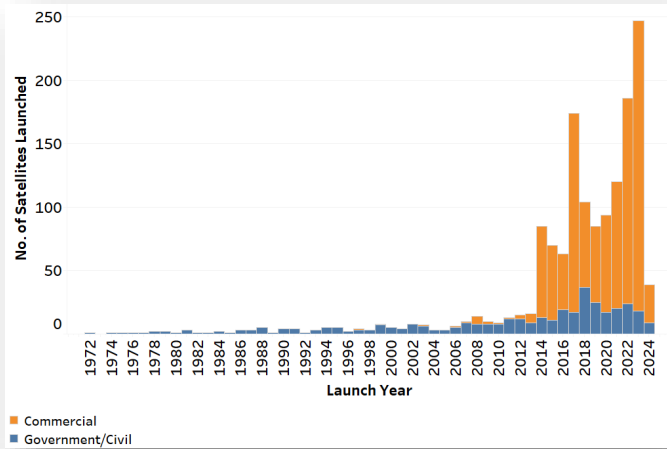
\$28 billion adjusted earnings in 2023



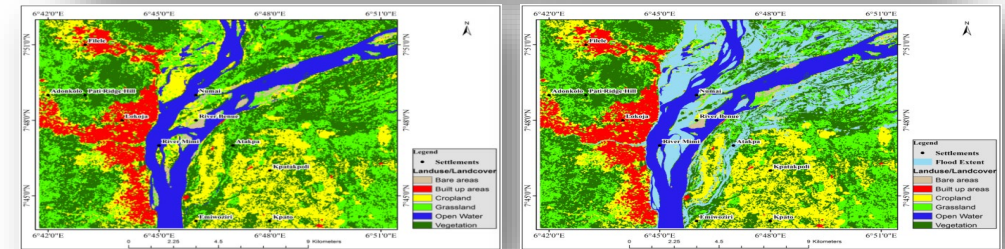
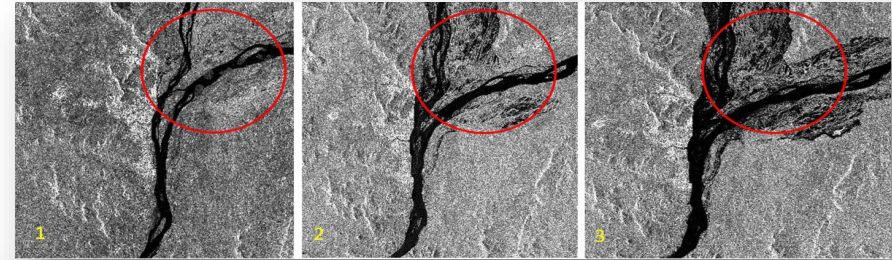
Living and operating in world with more frequent and impactful flood events



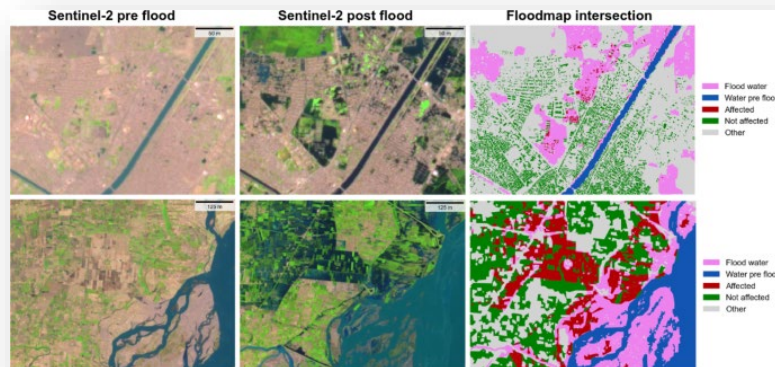
In a world with increasing EO capabilities



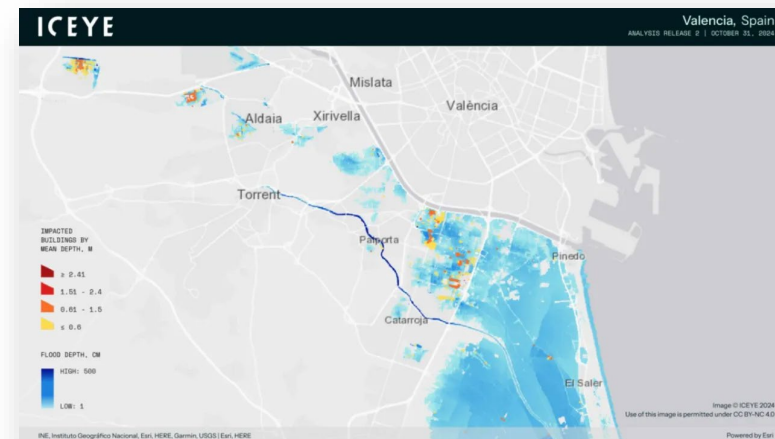
[Earth Observing Satellites | U.S. Geological Survey \(usgs.gov\)](https://www.usgs.gov/earth-observing-satellites)



[An assessment of flood event along Lower Niger using Sentinel -1 imagery | Environmental Monitoring and Assessment \(springer.com\)](https://www.springer.com/)



[Global flood extent segmentation in optical satellite images | Scientific Reports \(nature.com\)](https://www.nature.com/)



Following the #DANA Storm that affected Spain, ICEYE has collaborated closely with Spanish authorities to rapidly detect and quantify the impacts. Based on our fourth analysis release, we observed a flood extent of around 534 square kilometers, and estimate... | By ICEYE | Facebook

Our challenges

- Near real time data
- Standard deliverables formats
- Easy access
- Central access
- Data availability
- Increase data knowledge
- Complex environment
- Emergency Response preparedness
- Contracts in place
- Licences EULA
- Budget in place
- ...

Data & services

Technical expertise

Administration



Q & A

