



The Independent Accountability Mechanism for IFC & MIGA

Third Monitoring Report: IFC's Response to CAO Audit of IFC's Investment in Coastal Gujarat Power Limited (CGPL), India

IFC Project: #25797
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About CAO

The Office of the Compliance Advisor Ombudsman (CAO) is the independent accountability mechanism of the International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA), members of the World Bank Group. We work to facilitate the resolution of complaints from people affected by IFC and MIGA projects in a fair, objective, and constructive manner, enhance environmental and social project outcomes, and foster public accountability and learning at IFC and MIGA. CAO is an independent office that reports directly to the IFC and MIGA Boards of Executive Directors. For more information, see www.cao-ombudsman.org.

About the CAO Compliance Function

CAO's compliance function reviews IFC and MIGA compliance with environmental and social policies, assesses related harm, and recommends remedial actions where appropriate. CAO's compliance function follows a three-step approach:

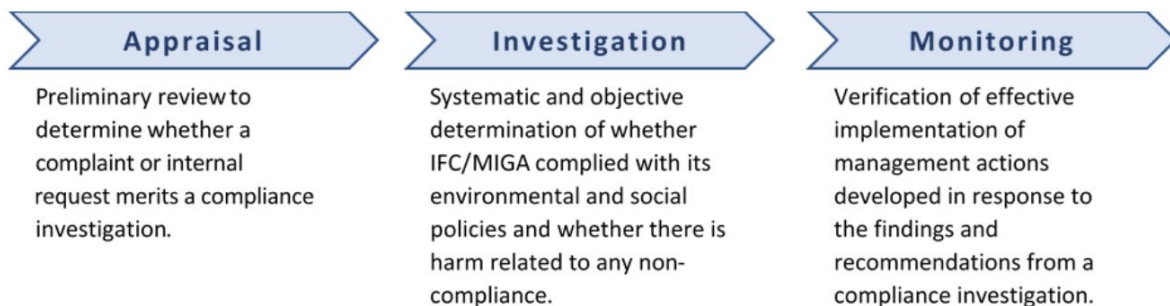


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Acronyms

ADB	Asian Development Bank
AMR	Annual Monitoring Report
BNHS	Bombay Natural History Society
CAO	Compliance Advisor Ombudsman
CGPL	Coastal Gujarat Power Limited
CPCB	Central Pollution Control Board
CSR	Corporate Social Responsibility
DOTS	Development Outcome Tracking System
EIA	Environmental Impact Assessment
E&S	Environmental & Social
ESAP	Environmental & Social Action Plan
ESRP	Environmental & Social Review Procedures
ESRS	Environmental & Social Review Summary
GN	Guidance Note
GPCB	Gujarat Pollution Control Board
GOI	Government of India
IFC	International Finance Corporation
MASS	<i>Machimar Adhikar Sangharsh Sangathan</i> (complainant NGO)
MOEF&CC	Ministry of Environment, Forests & Climate Change
MIGA	Multilateral Investment Guarantee Agency
MW	megawatts
NAAQS	National Ambient Air Quality Standards
NIO	National Institute of Oceanography
NO _x	Nitrogen oxides
PM _{2.5}	Particulate matter with a mean aerodynamic diameter of 2.5µm
PM ₁₀	Particulate matter with a mean aerodynamic diameter of 10µm
PS	IFC Performance Standard
SO ₂ /SO _x	Sulfur dioxide/oxides of sulfur
VDAC	Village Development Advisory Committee

Executive Summary

This monitoring report covers IFC's actions during 2017-2018 in response to the findings of CAO's 2013 Audit of IFC's Investment in Coastal Gujarat Power Limited (CGPL), India.¹ The Audit was prepared in response to concerns raised by local fisherfolk in two complaints (2011 and 2016) about the environmental and social (E&S) impacts of an IFC-supported coal-fired thermal power plant, including loss of fish habitat and mangroves, coastal erosion, air pollution, and related effects on their livelihoods and health. CAO monitoring confirms that IFC implemented most of the commitments it made in 2013 to work with CGPL on project-related E&S studies. However, these efforts did not address the Audit's findings on complainants' concerns. The client completed loan prepayments to IFC in 2018, ending the financial relationship, and IFC has subsequently taken no further action to address the CAO Audit findings. As a result, CAO has decided to close this monitoring process, noting that IFC's actions were inadequate to address CAO's non-compliance findings.

About this Report

Monitoring is the last phase in CAO's compliance process, enabling CAO to assess whether its compliance findings have translated into project and systemic level improvements by IFC/MIGA management. This report provides a summary of the previous monitoring efforts to provide the reader with a overall view of the various monitoring efforts.

Monitoring in this case began in 2014 following CAO's findings of IFC non-compliance in its October 2013 Audit of IFC's investment in Coastal Gujarat Power Limited (CGPL), India.² On November 25, 2013, IFC published a Statement and established an [Action Plan](#) (AP) to respond to CAO's findings and "address the concerns of affected communities, including the migrant fishing communities". CAO's monitoring has focused on IFC's actions to meet its AP commitments.

This is CAO's third monitoring report in this case, with previous monitoring reports published in January 2015 and February 2017. This final report, which covers 2017-2018, was originally completed in early 2019, but not published by CAO due to active litigation (see box for details). Given the lengthy delay since the previous reports, this report includes highlights from those earlier assessments.

Methodology: CAO reviewed project documents available as of October 2018 and conducted telephone interviews with IFC, the client, and complainant representatives. Where relevant, CAO cites information presented in reports from the Asian Development Bank's Office of Compliance Review, which received a parallel complaint about the project. CAO also undertook a monitoring mission in March 2025³, which included a site visit to the complainants' communities located close to the plant near Mundra port. The box below details how information from this visit informs this report.

¹ The term "Audit" was kept for consistency with the CAO [Operational Guidelines](#) (2013), which were in force at the time that this case was processed. The term "Audit" was replaced by "investigation" with the approval of the [IFC/MIGA Independent Accountability Mechanism \(CAO\) Policy](#), which became effective on July 1, 2021, and replaced CAO's Operational Guidelines. CAO completed the Audit of IFC's investment in CGPL and this monitoring report under the CAO Operational Guidelines (2013), which apply to this case under the Transitional Arrangements of the 2021 CAO Policy for ongoing cases. The 2013 Operational Guidelines provide that in cases where IFC/MIGA is/are found to be out of compliance, CAO will monitor the situation until actions taken by IFC/MIGA assure CAO that IFC/ MIGA is addressing the noncompliance. CAO published a first monitoring report in January 2015 and a second monitoring report in February 2017.

² See <https://www.cao-ombudsman.org/cases/india-tata-ultra-mega-01mundra-and-anjar>

³ CAO attempted in 2017 and 2018 to undertake a site visit as part of its monitoring effort, but did not receive the requested permission from the Government of India.

Decision to delay report publication

A final draft of this report, analyzing IFC's implementation of its Action Plan, was originally completed by CAO in early 2019. CAO elected to postpone publication as it would have coincided with active litigation proceedings in U.S. federal court involving the affected communities and IFC. The legal proceedings in the D.C. District Court of Appeals concluded in 2021 and the Supreme Court declined in 2022 to review the case for a second time.

CAO field visit, March 2025

In March 2025, CAO undertook a field visit to the project site, holding meetings with the complainants, their families, and other members of the 10 affected communities which fish and farm for their livelihoods. The visit provided CAO with important insights into the 2013 Audit and confirmed the draft 2017-2018 monitoring report's assessment and conclusions. It also enabled CAO to gain a more comprehensive understanding of the complainants' current conditions. A summary of the main feedback gathered during CAO's field visit is available in Appendix 1.

IFC Investment and Community Complaint

Coastal Gujarat Power Limited (CGPL or the company/client), a subsidiary of Tata Power Corporation Limited (Tata Power), operates a 4,150MW power plant outside Mundra port in Gujarat, India. The plant uses energy-efficient supercritical technology and sources coal from mines in Indonesia and other countries to supply power to utilities in five Indian states.

IFC supported the US\$2.4 billion project's development to expand access to reliable electricity in India where 400 million people lacked power at the time. IFC invested an A Loan of US\$450 million in CGPL in 2008 and its long-term financing helped obtain finance from other international and Indian institutions. The thermal energy plant began operating in 2013 and IFC's active investment ended in September 2018 when CGPL prepaid the loan.

In 2011, CAO received a complaint (CGPL-01) from *Machimar Adhikar Sangharsh Sangathan* (the Association for the Struggle for Fishworkers' Rights or MASS) representing fisher people living near the project construction site. The complaint alleged wide-ranging impacts on fishing communities, including deteriorating water quality and fish populations, blocked access to fishing and drying sites, forced displacement of fisherfolk, poor air quality, and destruction of natural habitats. The complainants argued that these impacts were inadequately identified and mitigated, and that the cumulative impacts from CGPL and other local industrial developments had not been adequately assessed.

In 2016, a second complaint (CGPL-02) about IFC's investment was submitted to CAO by residents of Tragadi village, situated near the plant. They raised specific concerns about the impacts of the plant's outfall channel on the environment and fishing livelihoods, including limited access to water resources, coastal erosion, and damage to fish stocks and natural habitats. Due to their similar concerns, CAO merged the two complaints into one case in 2017.

First and Second Monitoring Periods, 2013-2017: Prior Monitoring Observations

CAO's Audit of the CGPL-01 complaint, published in October 2013, found non-compliance in relation to IFC's pre-investment review and supervision of project-related E&S issues. These covered seven areas which have since been subject to CAO monitoring:

1. Environmental & Social (E&S) Review and Impact Assessment
2. Consultation with Fishing Communities
3. Land Acquisition
4. Air Quality Requirements
5. Marine Impacts
6. Cumulative Impacts
7. Project Monitoring

On November 25, 2013, IFC published an Action Plan, which committed CGPL to conduct independent studies on the complaint issues, including air quality, fish take, and coastal biodiversity, and to take remedial measures where adverse impacts were identified.

CAO released its first monitoring report of IFC's response to the non-compliance findings in January 2015. It noted that measures to commission technical studies, reported by IFC, were insufficient to address CAO's 2013 findings. In February 2017, CAO issued a second monitoring report, which again found the actions reported by IFC insufficient. CAO decided to keep the case open as a result.

In September 2017, CAO merged the CGPL-01 and CGPL-02 complaints, incorporating the issues raised by the Tragadi villagers into its ongoing monitoring of IFC's actions under CGPL-01. The parties to these complaints are jointly referred to in this report as "the complainants".

Third Monitoring Period, 2017-2018: CAO Observations

During the 2017-2018 monitoring period, IFC worked with its client to undertake various studies and initiatives to address CAO's 2013 Audit findings. While these efforts demonstrated engagement with the issues raised, CAO's monitoring found that they did not resolve the non-compliances identified in the Audit or address the concerns raised by the complainants.

1. Environmental & Social Impact Assessment: IFC's client commissioned a third-party socioeconomic survey in 21 villages and associated livelihood studies. However, while these reports present socio-economic circumstances in the post-project period, there is no evidence that they documented the project's impact on fishing communities, particularly the seasonally resident fishing community.

2. Consultations: IFC informed CAO that its client established Village Development Advisory Committees and reported regular community engagement. Nevertheless, complainants maintained they were not meaningfully consulted, and CAO observed that documentation of effective engagement with all affected groups was insufficient. Complainants also continue to assert that they did not have access to the various studies produced under IFC's Action Plan.

3. Land Acquisition and Economic Displacement: CGPL developed a livelihood improvement plan for 24 identified pagadiya fishers.⁴ However, the selection criteria to be exclusionary, and the broader issues of economic displacement remained unaddressed.

⁴ *Pagadiya* fishing refers to traditional hand and gill net fishing.

4. Air Quality: IFC reported that its client implemented mitigation measures including upgrading the plant's coal conveyor system, installing water sprinklers for dust suppression, and maintaining a public display of air quality data. However, repeated exceedances of PM10 standards were recorded at other site locations, and offset requirements for degraded airsheds appear not to have been met by CGPL.

5. Marine Impacts: IFC reported that CGPL commissioned model confirmation studies from the National Institute of Oceanography and partnered with IUCN on biodiversity assessment. While these studies provided additional data, they did not establish the scientifically-defined mixing zone required by the World Bank Group's EHS guidelines or adequately assess impacts on marine biodiversity and fish availability.

6. Cumulative Impacts: CGPL committed to undertake a cumulative impact assessment under the Action Plan as part of a proposed expansion for the power plant. This expansion did not take place and CAO found no evidence that the assessment had been undertaken.

7. Project Monitoring: Project documentation detailing CGPL's compliance with IFC E&S standards did not include all non-compliances raised by the CAO Audit or provide a framework for managing the project's E&S impacts that could be effectively monitored or audited.

Field Visit, March 2025: CAO Observations

Communities affected by the coal-fired power plant continue to report declining environmental quality, reduced fish stock and agricultural production, and socio-economic hardships. Specific impacts on their lives and livelihoods include diminishing fish catch levels, lower value fish catches, some loss of fish production due to the cooling water intake structure, fly ash dust affecting farming and fish drying activity, coastal erosion resulting in physical displacement, and loss of drinking and irrigation water supply due to increased salinity. Residents also report health impacts such as respiratory illness which they link to degraded air quality and skin rashes they claim result from contaminants in the outfall channel.

The CAO mission noted that the project sits within the Mundra Port & Special Economic Zone, a major industrial hub that includes CGPL, another large coal-fired thermal plant, one of India's largest private ports with container and bulk terminals, and food processing, textile, steel and solar equipment manufacturing plants, among others. As a result, most complainant concerns likely stem from the cumulative environmental impacts of industrial development rather than a single project. However, several reported impacts are likely attributable to the IFC-financed project, some of which the CAO team observed. These include:

- Significant coastal erosion near the discharge point of the plant's cooling water outfall
- Degradation of productive ecosystems in the outfall vicinity
- Reported destruction of fish fry and other aquatic organisms due to the intake screening process for the plant's cooling water system
- Deposition of fugitive coal dust and fly ash in areas around the plant
- Cases of skin irritation and rashes among fishing community members exposed to water discharged from the outfall.

Mitigation measures for these impacts are well understood. The most critical interventions include: (i) transitioning to a recirculating cooling water system, which would significantly reduce any thermal and chemical water pollution in the cooling water outfall, thereby reducing coastal erosion and the amount of fishkill at the intake; and (ii) implementing a coastal protection program to restore land lost from coastal erosion and ecosystems essential for near-shore fisheries.

Conclusion and Case Closure

CGPL fully repaid the loan in September 2018. Despite certain voluntary commitments received by IFC from its client prior to the repayment that offered a basis for continued monitoring of the project by IFC and CAO as well as a post-completion visit by CAO under the 2013 Action Plan, the lack of a commercial relationship with its former client, as well as the length of time that has elapsed since IFC's last efforts in 2018, makes it unlikely that IFC will resume any efforts to complete its 2013 Action Plan⁵ or address the findings of the CAO Audit. CAO has therefore decided to close this monitoring process.

CAO notes that this has been an unsatisfactory process for the complainants, their families, and their communities. It has been over a decade since local residents and fisher folk first raised their concerns about the environmental and social impacts of this IFC investment. To this day, the complainants insist that the concerns they raised about impacts on their health and livelihoods have not been effectively addressed and they are struggling to manage these adverse impacts. Despite the various studies IFC committed to undertake, the complainants say they have not experienced any improvements on the ground. CAO's monitoring efforts through 2018, and the 2025 mission, have been unable to establish that the Action Plan's desired outcomes have been achieved.

Looking forward, CAO considers that addressing the documented E&S challenges in the Mundra region would benefit from a collaborative approach. A regional program involving government agencies, multilateral development banks including the World Bank and ADB, local industries, and affected communities could help address the cumulative impacts of industrialization and growth through ecosystem restoration, infrastructure development for safe water supply, and sustainable livelihood opportunities for affected communities.

⁵ CAO has not received confirmation of the completion of three studies and assessments committed to under the 2013 Action Plan: the laboratory analysis of dried fish samples, the independent or government validation of the NIO Model Confirmation Study, and the assessment of cumulative impacts and third-party risks. Additionally, the third phase of the turtle monitoring program was not shared with CAO.

1. Background

1.1 About this Report

CAO Monitoring

Monitoring is the last phase in CAO's compliance process, providing an opportunity for CAO to assess whether its compliance findings have translated into project and systemic level improvements by IFC/MIGA management.

Monitoring in this case began in 2014 following CAO's findings of IFC non-compliance in its October 2013 Audit of IFC's Investment in Coastal Gujarat Power Limited (CGPL), India.⁶ IFC established an Action Plan in response to CAO's findings, and CAO's monitoring has focused on IFC's actions to meet its MMP commitments "to respond to and address the concerns of affected communities, including the migrant fishing communities".

This is CAO's third compliance monitoring report on the Mundra power project following its *2013 Audit of IFC Investment in Coastal Gujarat Power Limited, India*.⁷ The report focuses on responses by IFC during 2017-2018 to CAO's non-compliance findings. Previous monitoring reports were published in January 2015 and February 2017. Publication of this final report, was delayed due to litigation (see below). Given the lengthy delay since previous CAO reports in this case, this monitoring report makes reference to highlights from the prior publications.

Delay in Report Publication

A final draft of this report, analyzing IFC's implementation of its Action Plan was originally completed by CAO in early 2019. At that time, CAO elected to postpone publication as it would have coincided with active litigation proceedings in U.S. federal court involving the affected communities and IFC. These legal proceedings in the D.C. District Court of Appeals concluded in 2021 and the Supreme Court declined in 2022 to review the case for a second time.

CAO Field Visit, March 2025

In March 2025, CAO undertook a field visit to the project site. During the visit CAO held meetings with the complainants, their families, and other members of the 10 affected communities, which fish and farm for their livelihoods. The visit provided CAO with important insights into the CAO Audit and the draft monitoring report. It also enabled CAO to gain a more comprehensive understanding of the complainants' current conditions. The site visit confirmed the draft 2017-2018 monitoring report's assessment and conclusions. Appendix 1 provides a summary of the main feedback gathered during CAO's field visit.

1.2 IFC Investment and Project Description

In 2007, Coastal Gujarat Power Limited (CGPL or the client), a subsidiary of Tata Power, began development of a 4,150MW coal-fired power plant in Mundra, a port town in the Kutch district of Gujarat, India. The plant, known as the Mundra Ultra-Mega Power Plant (Mundra UMPP or the project), is located 3km from the Gulf of Kutch.

At the time of IFC's investment, the project's total cost was estimated at US\$4.14 billion, of which IFC financed US\$450 million in the form of an A loan. IFC's direct involvement with the client lasted until September 2018 when CGPL prepaid its loan.

⁶ See <https://www.cao-ombudsman.org/cases/india-tata-ultra-mega-01mundra-and-anjar>

⁷ CGPL case materials, including CAO's 2013 Audit report, IFC's response to the Audit and related materials are available on the CAO website. The CGPL-01 case page is available at <https://goo.gl/3Z4uVX>. The CGPL-02 case page is available at <https://goo.gl/LMTNBn>

The thermal plant, which began full operations in March 2013, utilizes supercritical technology to promote energy efficiency. The plant sources coal from mines in Indonesia and other countries. It was developed as part of the Government of India's power sector strategy to address the country's supply-demand gap. CGPL sells power to utilities in five states—Gujarat, Maharashtra, Haryana, Punjab, and Rajasthan—through a 25-year power purchase agreement.⁸

The plant's location is within a special economic zone and the IFC client has implemented several air emission control systems to minimize environmental impacts. These include: (i) high-efficiency electrostatic precipitators (ESPs) with 99.9% efficiency installed to ensure that particulate matter (PM) emissions do not exceed 100 mg/Nm³; (ii) low nitrogen oxide (NO_x) burners designed to reduce the formation of NO_x during combustion, lowering NO_x emissions; (iii) continuous emission monitoring systems to continuously monitor flue gas emissions, ensuring compliance with emission standards and facilitating real-time data analysis; and (iv) flue gas monitoring systems to monitor flue gas oxygen (O₂) and carbon monoxide (CO) levels at the economizer outlet, ensuring optimal combustion efficiency and reduced emissions.⁹

The plant utilizes seawater for its cooling system, which includes an intake channel, and an outfall channel.

1.3 The Complaints

First CGPL Complaint, 2011

In June 2011, CAO received a complaint (CGPL-01) regarding IFC's investment in CGPL from *Machimar Adhikar Sangharsh Sangathan* (MASS), the Association for the Struggle for Fishworkers' Rights, representing fisher people living near the project development site.¹⁰ The CGPL-01 complainants self-identify as belonging to a minority community of Wagher Muslims for whom fishing is an important traditional livelihood. The complainants migrate from home villages ranging from about 6km to 60km distance to two coastal fishing tent communities, Tragadi and Kotadi bunders, situated between and to the east of the power plant's cooling water intake and outfall channels. They live in these areas during a fishing season that lasts eight to nine months a year. They return to their home villages during the monsoon season when government regulations prohibit fishing.

The complaint raised concerns about the project's social and environmental impact on fishing communities, specifically: deterioration of water quality and fish populations, blocked access to fishing and drying sites, forced displacement of fishermen, community health impacts due to air emissions, and destruction of natural habitats, particularly mangroves. The complainants also argued that IFC and CGPL did not adequately identify and mitigate the impacts on fishing communities, and that the project's cumulative impacts were not adequately assessed.

Second CGPL Complaint, 2016

In April 2016, CAO received a second complaint about the CGPL Mundra power plant (CGPL-02) from residents of Tragadi village and members of the *Tragadi Sea Shore Development Committee*. This complaint also raised concerns about potential project impacts on local

⁸ IFC, Frequently Asked Questions: Coastal Gujarat Power Limited, Mundra, available at: <https://web.archive.org/web/20240520094829/https://www.ifc.org/en/where-we-work/country/india/faqs-cgpl>

⁹ ADB: Annual Environment & Social Monitoring Report (April 2012 to March 2013), Environmental and Social Performance Report September 2013 IND: Mundra Ultra Mega Power Project. <https://www.adb.org/sites/default/files/project-documents/41946-014-esmr-05.pdf>

¹⁰ The June 2011 complaint from *Machimar Adhikar Sangharsh Sangathan* to CAO regarding the Tata Power/CGPL Ultra Mega Power Plant is linked with CGPL-01 documentation on the CAO website, available at <https://goo.gl/vAPhGG>.

fishing communities and specifically on “foot fishers” (*pagadiya*), with a focus on marine impacts, access to the coast, community consultation, and security.¹¹ In September 2017, CAO concluded a compliance appraisal of the CGPL-02 complaint. As the two complaints raised substantially similar compliance issues, CAO merged the cases into the ongoing monitoring process for the CGPL-01 case (see below for an explanation of the CAO process).

Community Complaints to Additional Lender Accountability Mechanisms

In 2013, the Asian Development Bank (ADB), another project investor, undertook a compliance review of its investment in the Tata Mundra Ultra Mega Power Project following a complaint submitted by affected communities.¹² The ADB's Compliance Review Panel (CRP) conducted its investigation between 2013 and 2015, concluding that ADB had not complied with its environmental and social safeguard policies. The CRP identified several key areas of non-compliance, including inadequate consultation with affected communities, failure to properly identify project-affected persons, and insufficient assessment and mitigation of environmental and livelihood impacts.¹³ In response, ADB's Board approved a set of remedial actions, which were monitored by the CRP from 2015 through 2018. In its last monitoring report (published September 2018), the CRP acknowledged some progress but noted that significant gaps remained—particularly with regard to access to fishing grounds.¹⁴

1.4 CAO Process

Following an initial assessment, CAO referred the CGPL-01 complaint to its Compliance unit for appraisal in February 2012. In July 2012, the appraisal concluded that several issues raised by the complainants merited further inquiry and CAO opened a compliance Audit under its Operational Guidelines (2013).

2013 Audit Findings

In 2013, CAO published its compliance Audit report based on an investigation of the issues raised by the fishing communities in the complaint.

While acknowledging much diligent work done by IFC and CGPL in relation to E&S aspects of what is a large and complex project, the CAO compliance Audit validated key aspects of the complaint. Among the Audit's key findings was that IFC's E&S due diligence was not commensurate with project risks, including, for example, that vulnerable communities were not adequately considered at the time the project's E&S risks and impacts were assessed. CAO also found shortcomings in IFC's supervision of the project, with respect to ensuring project compliance with applicable World Bank Group standards on air quality, marine environment, access to land, and project monitoring.¹⁵ In response to CAO's report, IFC

¹¹ Refer to CAO's case webpage, India: Tata Ultra Mega-02/Tragadi Village (CGPL-02), available at <https://goo.gl/dwVvYlR>. At the request of the complainants, CAO has not published the CGPL-02 complaint.

¹² See: CRP, Mundra Ultra Mega Power Project, <https://lnadbg4.adb.org/dir0035p.nsf/alldocs/RDIA-9CQ3SS?OpenDocument>

¹³ Specific concerns included disclosure of information and conduct of consultations; thermal discharge from the outflow channel and loss of livelihood of fisherfolk; sludge treatment and disposal; restricted access to fishing grounds, coal dust and fly ash pollution, and health risks linked to degraded ambient air quality. CRP, Final Report on Compliance Review Panel Request No.2013/1 on the Mundra Ultra Mega Power Project in India (ADB Loan 2419), March 2015, [https://lnadbg4.adb.org/dir0035p.nsf/attachments/Mundra-CRPFinalReport-7Apr2015.pdf/\\$FILE/Mundra-CRPFinalReport-7Apr2015.pdf](https://lnadbg4.adb.org/dir0035p.nsf/attachments/Mundra-CRPFinalReport-7Apr2015.pdf/$FILE/Mundra-CRPFinalReport-7Apr2015.pdf)

¹⁴ CRP, Third Annual Monitoring Report to the Board of Directors on the Implementation of Remedial Actions for the Mundra Ultra Mega Power Project in India (Asian Development Bank Loan 2419), September 4, 2018, available at: [https://lnadbg4.adb.org/dir0035p.nsf/attachments/Mundra%203rd%20Monitoring%20Report-For%20Web.pdf/\\$FILE/Mundra%203rd%20Monitoring%20Report-For%20Web.pdf](https://lnadbg4.adb.org/dir0035p.nsf/attachments/Mundra%203rd%20Monitoring%20Report-For%20Web.pdf/$FILE/Mundra%203rd%20Monitoring%20Report-For%20Web.pdf)

¹⁵ CAO Audit of IFC Investment in Coastal Gujarat Power Limited, India, August 2013, <https://www.cao-ombudsman.org/sites/default/files/downloads/CAOAuditReportC-I-R6-Y12-F160.pdf>

agreed in November 2013 to an Action Plan “to respond and address the concerns of affected communities, including the migrant fishing communities.”¹⁶

As outlined in IFC’s 2013 Action Plan, the power plant operator committed to a series of third-party studies and monitoring initiatives. These included socio-economic surveys, marine and biodiversity assessments, air and fish quality monitoring, and health surveys in surrounding communities. At the time, CGPL was also pursuing an expansion project and agreed to prepare a comprehensive compliance document addressing third-party risks and cumulative impacts, in line with the 2006 IFC Performance Standards in effect when the investment was approved by the IFC Board. The 2013 Action Plan further stipulated that if any of the studies identified adverse impacts CGPL would develop appropriate mitigation measures in consultation with experts and relevant stakeholders.¹⁷

First and Second Monitoring Periods, 2013-2017

As required by the CAO Operational Guidelines, CAO has monitored IFC’s actions to address the non-compliances and respond to the concerns of affected communities. CAO published a first monitoring report in January 2015 and a second monitoring report in February 2017.¹⁸

The first monitoring report found the actions reported by IFC insufficient to address CAO’s findings. CAO noted that several of its findings suggested the need for a rapid, participatory, and expressly remedial approach to assessing and addressing project impacts raised by the complainants. However, IFC had reported steps taken to work on the commissioning of technical studies and on client corporate social responsibility (CSR) measures.¹⁹ The second monitoring report raised the same ongoing concerns.²⁰ More detail on the findings of CAO’s prior monitoring reports is provided under each complaint issue in Section 3, below.

In October 2018, IFC confirmed to CAO that the loan had been prepaid by the client the previous month. IFC subsequently has not had a direct exposure to the project.

Third Monitoring Period, 2017-2018

This third monitoring report addresses IFC’s response to the findings of CAO’s compliance Audit of the CGPL-01 complaint, and the new issues identified in CAO’s compliance appraisal of the CGPL-02 complaint, during 2017-2018. The report’s analysis is largely based on the research conducted by CAO through October 2018. Where observations from CAO’s 2025 mission to the project site are relevant, these are included as well.

1.5 Methodology

CAO completed the Audit of IFC’s Investment in CGPL and this monitoring report under the CAO [Operational Guidelines](#) (2013), which apply to this case under the Transitional Arrangements of the 2021 CAO Policy for ongoing cases.²¹ Under the Operational Guidelines, CAO’s compliance function undertakes appraisals and audits of IFC and MIGA projects with a view to improving the environmental and social (E&S) performance of the institutions. In cases where IFC/MIGA is/are found to be out of compliance, CAO will monitor the situation

¹⁶ IFC 2013 Action Plan, <https://www.cao-ombudsman.org/sites/default/files/downloads/IFCCGPLStatementandActionPlan.pdf>

¹⁷ IFC 2013 Action Plan.

¹⁸ See: <https://www.cao-ombudsman.org/cases/india-tata-ultra-mega-01mundra-and-anjar>

¹⁹ CAO, Monitoring of IFC’s Response to: CAO Audit of IFC Investment in Coastal Gujarat Power Limited, India, January 2015, <https://www.cao-ombudsman.org/sites/default/files/downloads/CGPLmonitoringreportJanuary2015.pdf>

²⁰ CAO, Second Monitoring Report of IFC’s Response to: CAO Audit of IFC Investment in Coastal Gujarat Power Limited, India, February 2017, <https://www.cao-ombudsman.org/sites/default/files/downloads/CGPLSecondCAOMonitoringReportFebruary2017.pdf>

²¹ See CAO Transitional Arrangements for CAO cases, available at: <https://www.cao-ombudsman.org/news/transitional-arrangements-cao-cases>.

until actions taken by IFC/MIGA assure CAO that IFC/ MIGA is addressing the noncompliance.²²

This third monitoring report of the CGPL-01 case is based on a review of IFC actions undertaken during 2017-2018. During the 2017–2018 monitoring period, IFC conducted one site supervision visit, and reviewed the client's 2016-2017 annual monitoring report.

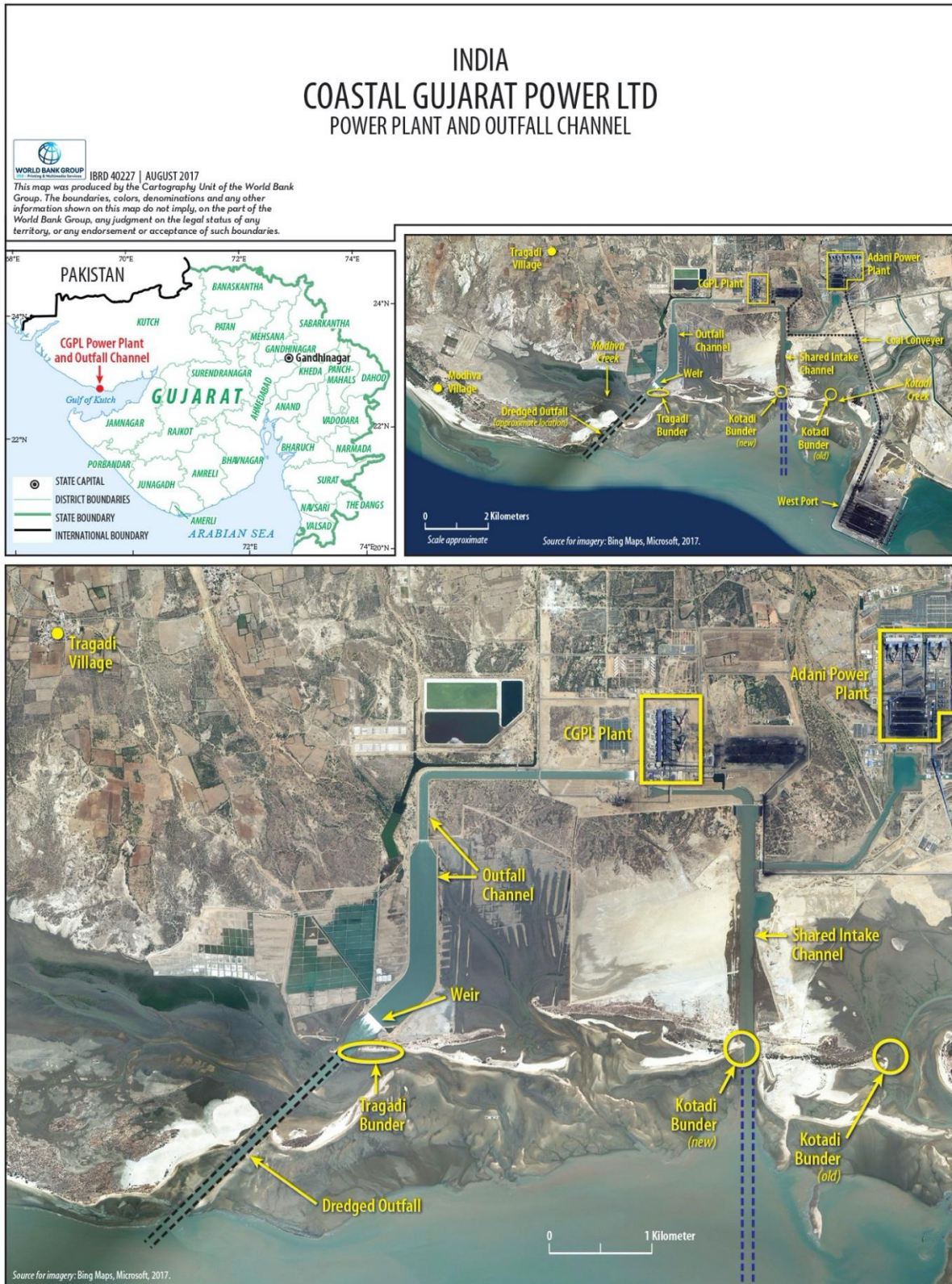
CAO's monitoring consisted of a review of documents available to CAO up to October 2018. CAO requested additional documentation from IFC in relation to actions taken from January 2017 to October 2018 to address the 2013 Audit findings, but no further project E&S information was provided. CAO's compliance monitoring for this period was therefore principally informed by telephone interviews with IFC, the client, and certain complainant representatives. CAO also reviewed public documents on the client's website and information from the ADB independent accountability mechanism's reports.²³ CAO was also able to obtain copies of supervision reports from the Government of Gujarat's Pollution Control Board (GPCB), completed between 2015 and 2017, relating to the plant's environmental performance against local and national standards.

No CAO site visit was conducted between 2017-2018 as CAO did not receive the necessary permissions from the Government of India. However, in October 2024, CAO received clearance from the Government of India to visit the project site. During this field mission in March 2025, CAO held meetings with the complainants, their families, and other members of the 10 affected communities. A summary of the main feedback gathered during CAO's field visit is available in Appendix 1.

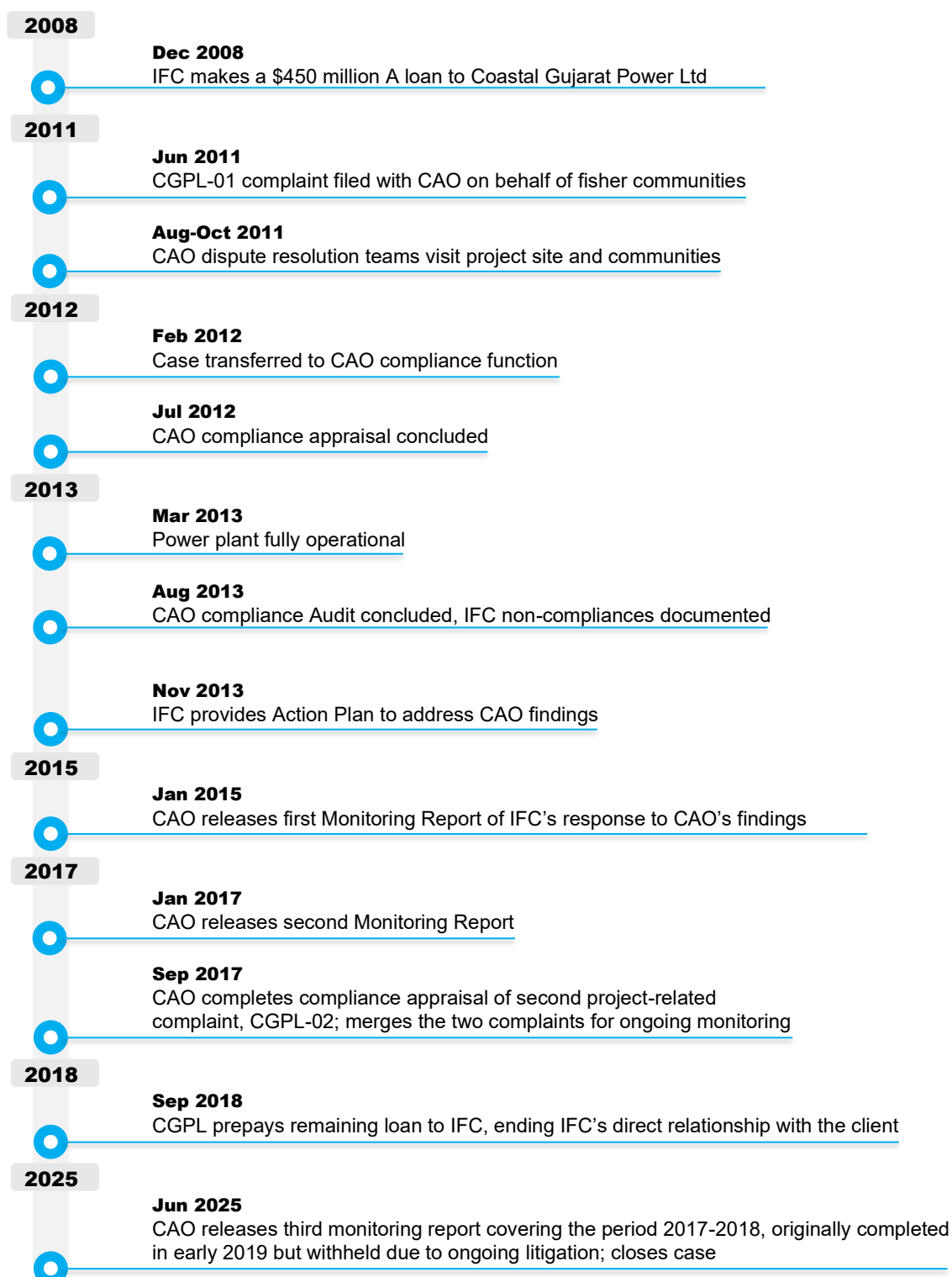
²² CAO Operational Guidelines, 2013, para. 4.4.6, available at: https://www.cao-ombudsman.org/sites/default/files/downloads/CAOOperationalGuidelines2013_ENGLISH_0.pdf.

²³ Mundra UMPP project safeguard documentation for the Asian Development Bank (ADB) is available at <https://goo.gl/KbPUYE>. ADB publishes the client's quarterly and annual E&S performance monitoring reports.

1.6 Site Map



1.7 Case Timeline



2. CAO Analysis of IFC Actions to Address Audit Findings for IFC's Investment in CGPL

Below, CAO presents an analysis of IFC's actions to address CAO's Audit findings. Each section summarizes CAO's Audit's non-compliance findings and the results of previous CAO monitoring. It then reviews IFC's actions during the monitoring period of 2017-2018. Issues raised in the CGPL-02 complaint that were not also raised in the CGPL-01 complaint, and therefore were not included in CAO's 2013 compliance Audit, are addressed separately.

Section 2.1 considers efforts to assess and manage project risks and impacts on fishing communities generally. Section 2.2 summarizes key concerns related to stakeholder engagement. Sections 2.3 to 2.7 address IFC's supervision of impact mitigation in relation to specific issues raised by the complainants. Section 2.8 briefly discusses the new issues raised in the CGPL-02 complaint.

2.1 Complaint Issue: Identification and Management of Project Impacts on Fishing Communities

Fisherfolk and their families have customarily used Tragadi and Kotadi bunders as seasonal residents. The complaints allege that project-related environmental impacts from the discharge of warm water, air pollution, and disturbance of the marine environment have adversely affected the health and livelihoods of these fishers and their families.

Complainants argue that construction of the plant's outfall drainage channel impacted their livelihoods in several ways. They lost access to markets due to the increased time and distance involved in accessing the bunder and lost part of the space available for drying fish, which was especially important to local women. They also state that the marine environment they depend on was affected by the destruction of mangroves and claim that warm water discharged through the outfall channel caused fish populations to move from nearshore areas to cooler waters away from the outfall. Moreover, complainants allege that air pollution in the project area both diminished resource availability and affected their health. More broadly, the complaints allege that gaps in the social and environmental assessment of the large-scale project led to flawed impact management plans.

Relevant IFC Standards

IFC's Performance Standards (PS) lay out E&S requirements for clients and IFC is required to assure that clients comply with relevant PS provisions when implementing projects. PS1: Assessment and Management of Environmental and Social Risks and Impacts requires E&S risks and impacts to be analyzed in the context of a project's "area of influence"²⁴ and applies to both direct and indirect impacts, including "areas potentially impacted by cumulative impacts".²⁵ The responsibilities of IFC and its clients to identify, address, and mitigate E&S impacts relevant to this case are set out in PS5: Land Acquisition and Involuntary Resettlement and PS6: Biodiversity Conservation and Sustainable Natural Resource Management.

²⁴ IFC. 2006. "Performance Standard 1: Social and Environmental Assessment and Management Systems," para. 5. *Performance Standards on Social & Environmental Sustainability*. Available at: <https://www.ifc.org/content/dam/ifc/doc/2000/2006-ifc-performance-standards-en.pdf>. [Hereinafter 'IFC 2006 PS1']

²⁵ IFC 2006 PS1, para. 5.

CAO Non-Compliance Findings

CAO's 2013 Audit found that IFC's E&S pre-investment due diligence did not ensure that the project's risks and impacts were assessed in the context of its area of influence or that safeguard planning involved adequate consultation with affected fisher families.²⁶ Specifically, CAO found that IFC did not meet PS1 requirements to ensure that the client's E&S assessment for the power plant: (a) considered "all relevant social and environmental risks and impacts of the project"²⁷; (b) was based on "appropriate social and environmental baseline data"²⁸; (c) took into account "the differing values attached to biodiversity by specific stakeholders"²⁹; or (d) was "adequate, accurate and objective"³⁰. CAO concluded that the complainants were impacted by loss of land, loss of access to natural resources used to support their livelihoods, and potentially affected by project-related impacts to air and the marine environment.

Furthermore, IFC's review of the client's project E&S assessment failed to identify complainant communities as affected people and, as a result, failed to verify that project impact assessments were informed by meaningful consultation.³¹

In response to CAO's Audit findings, IFC's 2013 Action Plan committed to upgrading the project E&S impact assessment in accordance with the Performance Standards. It stated that CGPL had contracted a household-level socio-economic survey and a separate needs survey to be carried out in villages and seasonal coastal settlements within the project's area of influence, and would also collect primary and secondary fish catch data.³²

Summary of First Monitoring Period: 2013-2015

During this period, IFC noted that the client had engaged an organization to collect fish catch data from the seasonally migrant community at Tragadi bunder. IFC also reported that the client had carried out socio-economic surveys in 17 of the 21 project-affected villages and was commissioning a study of socio-economic changes in the surveyed villages.³³ IFC stated that it envisaged the latter study addressing the gaps in the earlier E&S assessment of project impacts on local fishing communities. In 2014, IFC's project supervision report concluded that the client had adequate processes in place to monitor and mitigate identified risks and impacts. However, CAO's 2015 monitoring report raised, among other questions, whether the proposed socio-economic study would adequately meet PS1 requirements. CAO also questioned whether the approach outlined in the study proposal met IFC requirements for effective community participation.

Summary of Second Monitoring Period: 2015-2017

During this period, the client provided CAO with the final socio-economic study.³⁴ CAO's 2017 monitoring report concluded that this study did not address the lack of baseline data in relation to the seasonally resident fishing community or incorporate an impact assessment of the CGPL plant. In both monitoring reports, CAO suggested that IFC and the client pursue a rapid, participatory, and expressly remedial approach to assessing and addressing project impacts

²⁶ CAO. 2013. *CAO Audit of IFC Investment in Coastal Gujarat Power Limited, India*, p. 16. Available at: <https://www.cao-ombudsman.org/sites/default/files/downloads/CAOAuditReportC-I-R6-Y12-F160.pdf>. [Hereinafter 'CAO 2013 Audit of CGPL']

²⁷ IFC 2006 PS1, para. 4.

²⁸ IFC 2006 PS1, para. 4.

²⁹ IFC 2006 PS1, para. 4.

³⁰ IFC 2006 PS1, para. 7.

³¹ CAO 2013 Audit of CGPL

³² IFC 2013 Action Plan, p. 1.

³³ CAO. 2015. *Monitoring of IFC's Response to CAO Audit of IFC Investment in Coastal Gujarat Power Limited, India*. Available at: <https://www.cao-ombudsman.org/sites/default/files/downloads/CGPLmonitoringreportJanuary2015.pdf>. [Hereinafter 'CAO 2015 CGPL-01 Monitoring Report']

³⁴ ERM 2016 Socio-Economic Assessment.

affecting the complainants.³⁵ IFC further reported to CAO that it did not consider Kotadi bunder residents an affected community for two reasons: the intake channel was built earlier to serve the needs of another local power plant; and the client's studies and monitoring indicated that no material impacts from effluent discharge or air emissions had occurred at Kotadi bunder.³⁶ CAO's 2017 monitoring report stated that CAO's findings did not support this conclusion, and that any exclusion of Kotadi bunder residents from the area of influence could only be justified following an objective assessment based on consultation with those residents.³⁷

Third Monitoring Period, 2017-2018: Conclusions on Fishing Community Impacts

During this period, CGPL published a study of livelihoods of selected pagadiya fishers in the project area and an associated "livelihood improvement plan" for 24 pagadiya fishers the study identified as "affected".³⁸ CGPL also published a "health profile" study focusing on health issues related to air quality and conducted in seven villages within 10km of the power plant as well as two control villages (situated over 10km beyond CGPL's emission airshed) during April-May 2016.³⁹

IFC stated that, taken together, the studies and monitoring carried out under the Action Plan provided enough evidence to indicate that there were no significant adverse project-related impacts on local fishing communities. In January 2018, IFC closed all action items related to the assessment of impacts.⁴⁰

CGPL-02 complainants informed CAO that they were not aware of any mechanism put in place by CGPL to monitor E&S impacts. The complainants also insist that neither an E&S management plan nor additional monitoring data was shared with them.

CAO concludes that the actions taken by IFC during 2017-2018 do not fully address the 2013 non-compliance findings.

CAO remains concerned that no actions were taken to address the shortcomings identified by CAO in the 2015/16 monitoring report. CAO finds that while the socio-economic assessment and livelihood improvement plan present an account of socio-economic circumstances in the post-project period, they do not adequately address the lack of baseline data in relation to the seasonally resident fishing community.⁴¹

CAO review of the client's pagadiya fishers livelihood study and the associated "livelihood improvement plan" for 24 pagadiya fishers identified concerns that the methodology used to identify and select affected pagadiya fishers was not consistent with PS1 or PS5. Specifically, the plan's methodology seeks to identify "beneficiaries" and not "affected persons," and selection criteria are exclusionary rather than inclusive.⁴² The result of these shortcomings is that the client only planned to provide support for a subset of potentially affected fishers. Specifically, CAO found that no action plan items or studies referred to the seasonally resident fishing community on Kotadi Bunder where complainants reside.

³⁵ CAO 2015 CGPL-01 Monitoring Report, pp. 5, 15 and 22. Also refer to: CAO. 2017. *CAO Compliance Appraisal Report: Coastal Gujarat Power Limited: Tata Ultra Mega (Project # 25797), India, Complaint 02 - Tragadi Village*, p. 7. Available at: <https://www.cao-ombudsman.org/cases/india-tata-ultra-mega-02tragadi-village> [Hereinafter 'CAO 2017 CGPL-02 Appraisal Report.']

³⁶ CAO. Management Action Tracking Record (FY17) [15 May 2017].

³⁷ CAO 2017 CGPL-01 Second Monitoring Report, p. 8.

³⁸ Swadeep.2017. *Livelihood Improvement Plan for Identified Pagadiya Fishermen, Submitted to Coastal Gujarat Power Limited by Swadeep*.

³⁹ TALEEM Research Foundation. 2016. *A Baseline Health Profile with Respect to Air Quality in Airshed of CGPL Power Plant Submitted to Coastal Gujarat Power Limited (CGPL)*. [Hereinafter 'TALEEM 2016 Baseline Health Study – Air Quality'].

⁴⁰ IFC and CGPL, Management and Monitoring Plan, January 2018.

⁴¹ Refer to the ERM 2016 Socio-Economic Assessment, and to the Swadeep 2017 Livelihood Improvement Plan.

⁴² Swadeep 2017 Livelihood Improvement Plan, p.13.

Overall, CAO concludes that IFC, during its 2017-2018 supervision, did not ensure that its client resolved gaps in E&S baseline data, reconcile high-level and project-level means of impact identification and analysis, or conduct analysis that adequately involved all potentially affected communities.

2.2 Complaint Issue: Consultation with Fishing Communities

The CGPL-01 complaint raised concerns that fisher people who customarily used Tragadi and Kotadi bunders before project construction were not included as project-affected people in the E&S assessment. The CGPL-02 complaint raised additional concerns about the adequacy of ongoing project consultation and engagement, including allegations that the power plant operator established committees that did not fairly represent the interests of local fisher people.

Relevant IFC Standards

Under PS1, clients must undertake a consultation process for projects where affected communities may be subject to risks or adverse impacts and must consider and respond to communities' views.⁴³ Effective consultation should: (i) be based on the prior disclosure of relevant and adequate information, including draft documents and plans; (ii) begin early in the Social and Environmental Assessment process; (iii) focus on the social and environmental risks and adverse impacts, and the proposed measures and actions to address these; and (iv) be carried out on an ongoing basis as risks and impacts arise.⁴⁴ PS1 also requires consultation to be "culturally appropriate", including tailored to "the language preferences of the affected communities, their decision-making process, and the needs of disadvantaged or vulnerable groups".⁴⁵

Where projects have significant impacts on affected communities, IFC is required to assure itself that the client's community engagement efforts involve free, prior, and informed consultation and enable informed participation leading to broad community support.⁴⁶ Informed participation involves organized and iterative consultation, with the client incorporating into decision-making the views of affected communities on matters that affect them directly, such as proposed mitigation measures, the sharing of development benefits and opportunities, and implementation issues.⁴⁷ Under PS1, IFC must also require clients to document the process—particularly measures to avoid or minimize risks to and adverse impacts on the affected communities.⁴⁸

CAO Non-Compliance Findings

CAO's 2013 Audit found that IFC failed to assure itself that the client effectively consulted with directly-affected fishing communities. This lack of effective consultation resulted in missed opportunities to assess, avoid, and reduce potential adverse project impacts, and hindered efforts to build and maintain a constructive relationship with affected communities.⁴⁹ CAO's compliance appraisal for CGPL-02 also expressed concern over IFC's monitoring and supervision of CGPL's consultation and disclosure practices.⁵⁰ In the 2013 Action Plan, IFC and its client committed to ensure appropriate consultation with relevant stakeholders, including fishing communities, on project studies and other activities of community concern.⁵¹

⁴³ IFC 2006 PS1, p.5 para. 21.

⁴⁴ IFC 2006 PS1, p.5 para. 21.

⁴⁵ IFC 2006 PS1, p.5 para. 21.

⁴⁶ IFC 2006 PS1, p.5 para. 20.

⁴⁷ IFC 2006 PS1, p.5 para. 22.

⁴⁸ IFC 2006 PS1, p.5 para. 22.

⁴⁹ IFC 2006 PS1, p.2 para. 9.

⁵⁰ CAO 2017 CGPL-02 Appraisal Report, pp. 18-20.

⁵¹ IFC 2013 Action Plan, p.2.

Summary of First Monitoring Period: 2013-2015

During this period, CGPL produced a stakeholder consultation plan specifying organizations and groups to be consulted on the findings of each study conducted under the 2013 Action Plan.⁵² In 2014, the client published a report documenting its community assistance activities and efforts to engage with representatives from Modhva village, Tragadi village, and Tragadi bunder, recognizing that they faced potential impacts due to their close proximity to the outfall channel. At Tragadi bunder, engagement reportedly occurred monthly through a Village Development Advisory Committee (VDAC) established by the client.⁵³

Summary of Second Monitoring Period: 2015-2017

During this period, CAO was informed that CGPL had disseminated the findings of the studies conducted under the 2013 Action Plan, held consultations with fisher people,⁵⁴ and established VDACS for all project-affected communities. The client also commissioned a socio-economic study, completed in 2016, that documented consultations, interviews, and group discussions with a variety of stakeholders, including fisher people.⁵⁵

However, throughout 2014 to 2017, the complainants maintained that project consultations did not engage them in a meaningful way.⁵⁶

Third Monitoring Period, 2017-2018: Conclusions on Community Consultations

During this period, IFC and CGPL reported to CAO that the power plant operator continued to undertake regular, structured engagements with affected communities. The client stated that engagement with local fisher people occurred when preparing studies agreed with IFC, namely the socio-economic study and a third-party livelihood study and related action plan for selected pagadiya fishers.⁵⁷ IFC project documents include minutes of a June 2014 meeting between the client and representatives of MASS at which the parties reportedly agreed on social and economic benefit initiatives.

IFC and the client also reported CGPL development initiatives in fishing communities near the project site, including those at Tragadi bunder, which they claim received positive feedback from affected community members. In addition, the client stated it established a community information center to help facilitate community engagement and receive grievances. Now unavailable, the Tata Power website used to link to studies and media highlighting engagement with local fisher communities by the client and various third parties.⁵⁸

The complainants present the situation differently. They claim that neither the client nor IFC involved them in any of the community CSR initiatives or otherwise engaged them in defining mitigation actions to address project impacts. In addition, they state that they were not consulted on the progress of studies under the Action Plan and expressed dissatisfaction at the delay in completing studies and remedial actions. They were also unaware of the CGPL

⁵² Coastal Gujarat Power Limited (CGPL). 2014. *Key Stakeholder Consultation Plan: Coastal Gujarat Power Limited*. This plan is not publicly available.

⁵³ CGPL. 2014. *Turning the Tide: Molding the Lives of Fishermen on the Coastal Belt of Kutch, Gujarat*. Available at: <https://web.archive.org/web/20210427072340/https://www.tatapower.com/pdf/cgpl-mundra/turning-tide.pdf>. *Turning the Tide* is a voluntary CGPL report that outlines a range of project-sponsored activities which CGPL is conducting in the fishing villages near the plant.

⁵⁴ CAO. 2017. *Second Monitoring of IFC's Response to CAO Audit*, p. 8. [Hereinafter 'CAO 2017 CGPL-01 Second Monitoring Report'] Available at: <https://www.cao-ombudsman.org/sites/default/files/downloads/CGPLSecondCAOMonitoringReportFebruary2017.pdf>.

⁵⁵ ERM 2016 Socio-Economic Assessment. Refer to: "Annex 2: Summary Record of Consultations, Interviews and Group Discussions."

⁵⁶ This sentiment was conveyed to CAO in October 2014 by CGPL-01 complainants and was repeated during CAO's telephone conversations with CGPL-02 complainants in June 2017.

⁵⁷ Refer to ERM 2016 Socio-Economic Assessment and Swadeep 2017 Livelihood Improvement Plan.

⁵⁸ Tata Power. n.d. "Community Development Initiatives," *CGPL Mundra*. No longer available at: <https://web.archive.org/web/20181205180105/https://www.tatapower.com/businesses/cgpl-mundra/csr.aspx>.

grievance redress function and had not used the system to register grievances. In relation to the VDACs, complainants expressed to CAO that these committees did not represent their views or interests.

CAO concludes that the actions taken by IFC during 2017-2018 do not fully address the 2013 non-compliance findings.

During past monitoring periods, CAO raised questions about the extent to which complainants have been treated as affected community members in the design and implementation of both studies and remedial actions under IFC's Action Plan. CAO requested that IFC provide up-to-date documentation of project engagement with stakeholders, and specifically with complainants, in light of concerns raised by CGPL-02 complainants that local fisher people were not fairly represented by the VDACs.

In addition, during 2017-2018, CAO requested:

- Insights into how the 24 identified beneficiaries as well as other project-affected fishers reacted to the *Livelihood Improvement Plan for Identified Pagadiya Fisher Folk*⁵⁹
- Examples of how stakeholder engagement has informed the design and implementation of the client's CSR activities
- Information on CGPL grievance handling.

IFC did not provide CAO with any such documentation. Nor did IFC provide evidence or analysis, such as a social impact assessment, to support its conclusion that Kotadi bundar is outside the project area of influence. Under PS1, the seasonal community at Kotadi bundar should have had the opportunity to participate in a consultation process substantiated through a well-developed stakeholder engagement plan.⁶⁰ However, CAO finds no indication that IFC requested its client to undertake consultation with fisher people at Kotadi bundar consistent with PS1 to determine that the project's impacts do not affect them.

Additional Observations

During CAO's 2025 mission, the complainants continued to assert that CGPL's consultations over the project and its impacts failed to engage them meaningfully. Without having received appropriate documentation, CAO cannot be assured that IFC's supervision of client engagement with affected communities was adequate. CAO is unable to establish whether IFC ensured disclosure of relevant information on project risks, impacts, and mitigation actions to all affected stakeholders.⁶¹

⁵⁹ Swadeep, 2017, Livelihood Improvement Plan.

⁶⁰ IFC 2006 PS1, paras. 2, 8, 19-23.

⁶¹ During CAO's March 2025 site visit complainants maintained the position that they were not engaged and had never received any of the documentation mentioned in this subsection.

2.3 Complaint Issue: Land Acquisition and Displacement

Both the CGPL-01 and CGPL-02 complaints allege social and economic harm resulting from land acquisition for the project:

- Both complaints raise concerns that construction of the power plant's intake and outfall channels increased travel distances to access the bund and between the bund and local fish markets.
- Parties to CGPL-02 further allege that access to the seashore has been restricted by CGPL security forces both by closing the access road and due to intimidation.
- The CGPL-01 complaint emphasizes that loss of land and open spaces at Tragadi and Kotadi bunds negatively impacts the livelihoods of fisher people and their families, particularly women and children who used the area for sun-drying and sorting fish.
- The same complaint alleges that livelihood enhancement measures sponsored by the company are inadequate as complainants continue to be excluded from project decision-making on impact identification and mitigation.
- The CGPL-02 complaint alleges that the client is not delivering on its livelihood commitments under the CSR program, specifically citing a water delivery program.
- The CGPL-02 complaint alleges that the client destroyed houses on the bund without prior consultation or adequate compensation.

Relevant IFC Standards

IFC's Performance Standard 5: Land Acquisition and Involuntary Resettlement applies to both physical displacement (relocation or loss of shelter) and economic displacement (loss of assets or access to assets that leads to loss of income sources or means of livelihood) resulting from project-related land acquisition.⁶² Under PS5, clients must protect displaced persons with no recognizable legal right or claim to the land they occupy in cases of both physical displacement and for loss of income or livelihood.⁶³

IFC considers resettlement to be involuntary when affected individuals or communities do not have the right to refuse land acquisition that results in displacement.⁶⁴ In such circumstances, PS5 seeks to mitigate adverse social and economic impacts and to improve, or at least restore, the livelihoods and standards of living of displaced people. Impact mitigation under PS5 is ensured by providing compensation for loss of assets at replacement cost, and implementing resettlement activities with appropriate disclosure of information, consultation, and the informed participation of affected people.⁶⁵ PS5 also requires that clients provide displaced persons with targeted assistance and opportunities to improve or at least restore their income-earning capacity, production levels, and standards of living when their livelihoods or income levels are adversely affected, as well as transitional support, as necessary, based on a reasonable estimate of the time required to restore their income earning capacity, production levels, and standards of living.⁶⁶

⁶² Land acquisition includes both outright purchases of property and purchases of access rights, such as rights-of-way. IFC. 2006. "Performance Standard 5: Land Acquisition and Involuntary Resettlement," para. 1. *Performance Standards on Social & Environmental Sustainability*. [Hereinafter 'IFC 2006 PS5.'] Available at: <https://goo.gl/EUZpic>.

⁶³ IFC 2006 PS5, pp. 21-22, paras. 18 and 20.

⁶⁴ IFC 2006 PS5, p.18, para. 1.

⁶⁵ IFC 2006 PS5, pp. 21-22, para. 20.

⁶⁶ IFC 2006 PS5, p. 21, para. 20.

CAO Non-Compliance Findings

The power plant's construction entailed removal of a large portion of the sand bar that constitutes Tragadi and Kotadi bunders in order to widen the seawater intake channel and build the outfall channel. These areas were distinct from land parcels formally acquired under the project's resettlement plan. The project impact assessment described the bunder as a vacant common property resource used only for grazing. CGPL-01 complainants claim to have customarily utilized these areas for livelihoods derived from marine resources, including fishing, fish-drying, and marine resource harvesting for up to nine months of the year.⁶⁷

CAO's 2013 compliance Audit found that settlements on Tragadi and Kotadi bunders and customary access roads were excluded from project land acquisition and resettlement impact assessment and mitigation planning, which was not consistent with the requirements of the IFC Sustainability Policy. The Audit identified various gaps in IFC's pre-investment E&S due diligence. Project impact studies at the time of IFC's E&S appraisal recorded no data on the livelihoods of the complainant fishing communities. Project baseline studies and impact assessments did not consider the circumstances of the people using the area and how they might be affected by loss of access to roads, loss of area for settlements, loss of common lands, and the potential for project-related changes in natural resource availability. As a result, CAO concluded that IFC failed to ensure the proper application of PS5 in relation to local fishing communities and customary users of these bunders. In addition, the Audit found that IFC lacked a framework to assess the adequacy of client-sponsored livelihood development initiatives for project-affected fisher people.⁶⁸

Summary of First Monitoring Period: 2013-2015

In 2013, the client reported to CAO that no adverse project impacts on the livelihoods of fisher people had been demonstrated.⁶⁹ CGPL described how, as part of its general CSR requirements, it had implemented livelihood enhancement initiatives at Tragadi bunder, including a pilot fish farming project, drinking water provision, purchase of fishing nets, medical camps, support for a school teacher, and mobile sanitation.⁷⁰ While CAO acknowledged these efforts and the client's steps to assess socio-economic impacts on nearby villages, the 2015 monitoring report found that IFC had not adequately addressed PS5-related Audit findings. The report emphasized the need for a robust and participatory assessment of impacts on fishing communities, supported by appropriate baseline data, to substantiate IFC's position that no households on the bunder were displaced due to project construction. CAO further noted that, over time, IFC's capacity to ensure that project impacts on complainants were assessed using reliable baseline data had diminished, weakening the application of PS5.⁷¹

⁶⁷ Seasonal fishers and their families live on Tragadi bunder for up to 8-9 months each year and rely on natural resources for their livelihoods; see CAO 2013 Audit of CGPL, p. 10.

⁶⁸ CAO 2013 Audit of CGPL, pp. 36-39.

⁶⁹ The client shared an impact assessment study with CAO, which the client interprets as evidence that the project involves no adverse impacts on the livelihoods of fisher people. Refer to: Tata Consulting Engineers. 2013. *Final Environment Impact Assessment Report for Proposed Expansion of CGPL*. CGPL Environmental Impact Assessment for Proposed Expansion of CGPL (December 2013). Annex XXIX. p. 513.

⁷⁰ CGPL. 2014. *Turning the Tide: Molding the Lives of Fishermen on the Coastal Belt of Kutch, Gujarat*. The ADB's Compliance Review Panel report noted in 2015 that access restrictions on people residing at Tragadi bunder had caused additional time travel costs through the use of a new, 3.8km longer, access road. Under the project's remedial action plan for ADB, CGPL agreed to compensate residents of Tragadi bunder through additional service provisions (supply of drinking water and health and education services) during the nine months a year they fish and reside at the bunder. See: ABD. 2015. *ADB Report on Access Restrictions to Fishing Grounds, August 2015, IND: Mundra Ultra Mega Power Project*. Available at <https://www.adb.org/sites/default/files/project-documents/41946/41946-014-escar-en.pdf>; ADB. 2015. *Proposed Remedial Action Plan: India: Mundra Ultra Mega Power Project*. Available at: <https://goo.gl/YKwfrW>; Also refer to ADB Compliance Review Panel (CRP). 2018. *Third Annual Monitoring Report to the Board of Directors on the Implementation of Remedial Actions for the Mundra Ultra Mega Power Project in India (Asian Development Bank Loan 2419)*, p. 11 (para. 31). [Hereinafter 'CRP 2018 Third Annual Monitoring Report for the Mundra UMPP.'] Available at: <https://bit.ly/45ghrD0>.

⁷¹ CAO 2015 CGPL Monitoring Report, pp.15-16.

Summary of Second Monitoring Period: 2015-2017

During CAO's 2017 Monitoring Report preparation, IFC continued to maintain there was no evidence that the project had displaced fishing communities, either physically or economically. Accordingly, IFC took the position that PS5 does not apply to this project. IFC noted that, under the 2013 Action Plan, its client had commissioned third party experts to collect data on fish catch and fisherfolk livelihoods and to undertake temporal analysis of these data.⁷² IFC and the client reported to CAO that they interpreted these study findings as demonstrating that the project had resulted in no significant adverse impacts on fishing livelihoods. They also pointed to the 2017 *Livelihood Improvement Plan for Identified Pagadiya Fishermen* as an effort to fill the gaps on data and analysis related to project impacts on these fishers. This plan attempts to define a methodological basis for identifying beneficiary fisher people from Tragadi and Modhva villages and Tragadi bundar,⁷³ and to collect basic socio-economic information on those identified to support monitoring of livelihood indicators.⁷⁴

While IFC maintained in 2017 that the project had no adverse impacts on fishing livelihoods, IFC reported that its client contributes to local livelihood improvement through CSR initiatives, some of which are mandated by the Government of India under the environmental clearances granted to the project.⁷⁵ In the absence of a new social assessment supporting IFC's position, CAO maintained the item open for monitoring, emphasizing that compliance with the Sustainability Policy requires IFC to ensure "adequate, accurate, and objective" assessment of the application of PS5 to the populations on Kotadi and Tragadi Bunders "prepared by qualified and experienced persons."⁷⁶

Third Monitoring Period, 2017-2018: Conclusions on Land Displacement

During this period, CGPL published on its website information about project assistance to fishing communities in Tragadi and Modhva villages.⁷⁷ While CAO recognized that IFC worked with its client under the 2013 Action Plan to assess socio-economic impacts, it found these efforts insufficient to meet PS5 requirements.⁷⁸ In line with the 2015 and 2017 monitoring reports and in the absence of additional information, CAO concludes that activities under IFC's 2013 Action Plan do not address the lack of baseline information and expert assessment necessary for determining PS5 applicability to complainant fishing communities prior to project construction.

Specifically, the client's socio-economic and fish catch studies are insufficient for ascertaining the potential for project-related social and economic impacts to households that derived part of their livelihood from fishing at Tragadi and Kotadi bunders. The studies are broad social assessments and trend analyses of changes and lack a clear definition of area of influence or any reference to the IFC Performance Standards or other applicable impact assessment requirements. Similarly, CAO finds that the project socio-economic study and livelihood restoration plan inadequately identify, evaluate, and mitigate potential project impacts to the livelihoods of the pre-project fishing families represented in the CGPL-01 and CGPL-02

⁷² Data on fish catch was collected by the consultancy Aakar Empowerment Pvt Ltd. between October 2013 and April 2014. In September 2014, Aakar produced an informal report for the client, entitled *Impact of CGPL project on habitation, life, and livelihoods of fisherfolk at Tragadi bundar* summarizing data collection methodologies and providing analysis and conclusions. Further analysis of these and other data was undertaken by the consultancy Environmental Resources Management and published in the ERM 2016 Socio-Economic Assessment; p.100.

⁷³ Swadeep 2017 Livelihood Improvement Plan, section 3.5.

⁷⁴ Swadeep 2017 Livelihood Improvement Plan, section 4.2.(k).

⁷⁵ Project clearances and other regulatory documents are available on the Tata Power website, available at: <https://web.archive.org/web/20171031065255/https://www.tatapower.com/sustainability/compliance.aspx>

⁷⁶ CAO 2017 Second Monitoring Report CGPL, p.9.

⁷⁷ Tata Power, "Community Development Initiatives" *CGPL Mundra*; available at: <https://web.archive.org/web/20181205180105/https://www.tatapower.com/businesses/cgpl-mundra/csr.aspx>

⁷⁸ ADB reported that CGPL had discontinued services to Tragadi bundar residents since August 2017, including the supply of potable water, periodic health camps, and other community services. ADB's Compliance Review Panel found this service disruption noncompliant with ADB's remedial action plan requirements for compensating Tragadi bundar residents for project-related impacts caused by access restriction. CRP 2018 Third Annual Monitoring Report for the Mundra UMPP, pp. 11-12.

complaints.⁷⁹ CAO also finds that these studies fail to address complainants' broader concerns for economic displacement and adverse impacts to livelihoods.⁸⁰

CAO concludes that the actions taken by IFC during 2017-2018 do not fully address the 2013 non-compliance findings.

CAO remains concerned that IFC and client actions taken under the Action Plan did not achieve adequate identification and assessment of potential project impacts on the complainant communities consistent with PS5 requirements.

Additional Observations

CAO's March 2025 site visit found that the complainant's socioeconomic conditions have likely deteriorated concomitantly with decreases in fish catch quantity and quality, increased salinity levels in ground water, loss of habitable land due to erosion near the outfall, and poor air quality.

2.4 Complaint Issue: Air Quality

The CGPL-01 complaint raised concerns about the impact of coal ash and other airborne pollution on fish drying and public health, including possible exposure to radioactive coal ash. The analysis below covers three air quality issues relevant to the plant: ambient air quality (section 2.4.1), stack emissions (section 2.4.2), and radioactivity of coal ash (section 2.4.3).

Relevant IFC Performance Standards

IFC's Performance Standard 3 (Pollution Prevention and Abatement) recognizes that increased industrial activity often generates increased pollution to air, water, and land that may threaten people and the environment.⁸¹ To address adverse project impacts on existing ambient conditions, PS3 requires that IFC clients consider the finite assimilative capacity of the environment, existing and future land use, existing ambient conditions, the project's proximity to ecologically sensitive or protected areas, and the potential for cumulative impacts with uncertain and irreversible consequences.⁸² The client must also promote strategies that avoid or, where avoidance is not feasible, minimize or reduce the release of pollutants. When the project has the potential to constitute a significant source of emissions in an already degraded area, clients must promote strategies that help to improve ambient conditions.⁸³

In addition to meeting relevant Performance Standards, IFC and CGPL's 2007 Environmental and Social Action Plan (ESAP)⁸⁴ stated that the plant would comply with the World Bank Group's *Pollution Prevention and Abatement Handbook: Thermal Power Guidelines for New Plants* (1998) and *General Environmental Health and Safety (EHS) Guidelines* (2007).⁸⁵

⁷⁹ ERM 2016 Socio-Economic Assessment; and Swadeep 2017 Livelihood Improvement Plan.

⁸⁰ CRP's third annual monitoring report in 2018 also concluded that the Livelihood Improvement Program devised for the 24 pagadiyas was flawed in that: (i) it most likely did not consider the full impact of loss of livelihood due to increased temperature at the wastewater discharge point and impacts of the thermal plume; (ii) the grievance mechanism for the pagadiyas was not properly disseminated; and (iii) preparation and implementation of a robust medium-term livelihood support program was still needed. CRP 2018 Third Annual Monitoring Report for the Mundra UMPP, paras 23-27.

⁸¹ IFC. 2006. "Performance Standard 3: Pollution Prevention and Abatement," p. 11, para. 1. *Performance Standards on Social & Environmental Sustainability*. [Hereinafter 'IFC 2006 PS3'] Available at: <https://www.ifc.org/content/dam/ifc/doc/2000/2006-ifc-performance-standard-3-en.pdf>.

⁸² Assimilative capacity refers to the capacity of the environment for absorbing an incremental load of pollutants while remaining below a threshold of unacceptable risk to human health and the environment.

⁸³ IFC 2006 PS3, p. 13, para. 9.

⁸⁴ IFC and CGPL. 2007. *Environmental and Social Action Plan - Coastal Gujarat Power Limited, Tata Ultra Mega Project # 25797* (November 2007). The 2007 version of this document is no longer available through the IFC website; refer to: IFC and CGPL 2018 Management and Monitoring Plan.

⁸⁵ IFC's *General Environmental Health and Safety (EHS) Guidelines* are available at: <https://www.ifc.org/en/insights-reports/2000/general-environmental-health-and-safety-guidelines>. The 2007 *General EHS Guidelines* section on air quality is available at: <https://www.ifc.org/content/dam/ifc/doc/2000/2007-general-ehs-guidelines-en.pdf>; World Bank Group. 1998. "Thermal Power: Guidelines for New Plants," *Pollution Prevention and Abatement Handbook* [Effective July 1998], pp. 416-419.

CAO Non-Compliance Findings and IFC Response

CAO's 2013 Audit found that IFC's pre-investment E&S due diligence paid inadequate attention to areas potentially impacted by project-related developments that were realistically defined at the time of the E&S assessment. This had consequences for IFC's supervision of CGPL's obligations to comply with no net increase provisions for particulate matter (PM) and sulfur dioxide (SO₂) under the World Bank Group's 1998 Thermal Power Guidelines. CAO also concluded that IFC failed to ensure that the client explored offsets to achieve "no net increase" in total emissions of particulate matter or to ensure that ambient SO₂ and nitrogen oxide concentrations were within the levels specified by the Guidelines for moderately degraded airsheds.⁸⁶

IFC's 2013 Action Plan responded to CAO's findings on air quality by committing to:⁸⁷

- Continuing ambient air quality monitoring, including in fish drying areas used by seasonally resident fishing communities as well as villages surrounding the plant
- Establishing an inspection program to assess coal and ash dust deposits in neighboring communities
- Conducting laboratory analysis of dried fish samples to assess ash and coal dust contamination
- Testing ash residue for radioactivity and heavy metals
- Monitoring selected parameters that had changed significantly from the baseline.

The following subsections cover specific areas of CAO monitoring regarding IFC's efforts to address air quality issues raised by complainants.

2.4.1 Ambient Air Quality

Summary of First Monitoring Period: 2013-2015

During this period, the client produced an environmental impact assessment (EIA) report for a proposed production capacity expansion at the coal-fired power plant.⁸⁸ This 2013 EIA reported existing concentrations of PM₁₀ in ambient air around the project site that exceeded the limits for moderately degraded airsheds defined in the World Bank Group's 1998 Thermal Power Guidelines. These exceedances required offset activities by CGPL to ensure: (a) no net increase in the total emissions of particulate matter or sulfur dioxide within the airshed; and (b) that the resultant ambient concentrations of nitrogen oxide did not exceed the levels specified for moderately degraded airsheds.⁸⁹ IFC also provided documentation showing that 12 pollutants were being monitored at test locations within and outside the plant.⁹⁰ IFC noted

[hereinafter "World Bank Group's 1998 Thermal Power Guidelines"] Available at: <https://www.ifc.org/content/dam/ifc/doc/1990/thermnew-ppah.pdf>.

⁸⁶ The World Bank Group will classify airsheds as moderately degraded if concentration levels are above 100 µg/m³ annual average or if the 98th percentile of 24-hour mean values over a period of one year is estimated to exceed 150 µg/m³ of nitrogen oxides. The Mundra UMPP does not appear to have data measurements adequate for making this determination. *Refer to:* World Bank. 1999. *Pollution Prevention and Abatement Handbook* [Effective July 1998], p. 226. Available at: <https://www.ifc.org/en/insights-reports/1990/publications-handbook-ppah--wci--1319577543003>.

⁸⁷ IFC 2013 Action Plan, pp. 1-2.

⁸⁸ TCE 2013 EIA – Capacity Expansion. The executive summary from a draft version of the expansion EIA study is available on the GPCB website at: https://web.archive.org/web/20181205175846/https://gpcb.gov.in/pdf/COSTAL_GUJ_POWER_EXE_SUMM_ENG.PDF TCE. 2013. Executive Summary, Draft EIA – Capacity Expansion (April 2013). [Hereinafter 'TCE 2013 Executive Summary, Draft EIA – Capacity Expansion.'] Note: During CAO's second monitoring period (2015-2017), the client informed CAO that the planned production capacity expansion had been postponed indefinitely.

⁸⁹ TCE 2013 EIA – Capacity Expansion, p. 46-47. Also: World Bank Group. 1998. "Thermal Power: Guidelines for New Plants," *Pollution Prevention and Abatement Handbook* [Effective July 1998], pp. 416-419. Available at: <https://www.ifc.org/content/dam/ifc/doc/mgrt/ppah.pdf>, p. 417.

⁹⁰ The Tata Power website hosted a sample of these data, collected at Tragadi bunder by CEG Test House, for September 2014 through October 2015. CEG Test House. 2015. *Environmental Monitoring Report for M/S Coastal Gujarat Power Limited (A Tata Power Company) 4150 MW (5X830MW) Thermal Power Plant, Mundra, Gujarat. Location: Tragadi Bunder (2014-2015).*

that the client would carry out ambient air quality monitoring at Tragadi bunder on a monthly basis for a year, after which monitoring would be seasonal.

CAO's 2015 monitoring report also noted instances of project non-compliance with India's National Ambient Air Quality Standards for PM₁₀.⁹¹

Summary of Second Monitoring Period: 2015–2017

IFC provided ambient air sampling data taken at Tragadi bunder between January and November 2015, and concluded that the local ambient air quality conditions could be classified as non-degraded for PM₁₀ and PM_{2.5}.⁹² In response to community concerns, CGPL assessed dust deposition at six locations in neighboring communities between November 2014 and June 2015.⁹³ The client study concluded that dust derived from various sources including industry, soil, coal and oil burning, construction activities, motor vehicles, and road dust, and that deposits on windows, cars, and houses were not due to project operations. CAO's 2015 monitoring report noted that IFC lacked information to inform its supervision on the environmental and health implications of the dispersion and deposition of ash particles.⁹⁴

Third Monitoring Period: 2017-2018

During this period, CAO learned that the client had produced a 'baseline' health profile in 2016, four years after the plant's first generator unit was commissioned.⁹⁵ This study collected and analyzed health indicators, including potential air quality impacts to human health such as instances of asthma in children and the prevalence of respiratory problems among adults.

In 2018, CGPL reported to CAO that it continued to implement measures for mitigating potential project air pollution. Efforts included upgrading the plant's coal conveyor system to reduce fugitive dust, ensuring coal heaps were below the maximum 5-meter height prescribed by the Gujarat Pollution Control Board (GPCB), and maintaining wind guards.⁹⁶ Regarding fly ash, the plant employed a water sprinkler system with 40 sprayers to ensure adequate dust suppression. The plant operator further reported disclosing up-to-date ambient air quality information to neighboring communities using a digital signboard outside the Mundra UMPP gates.⁹⁷ CGPL informed CAO that community members had expressed satisfaction with the upgrades to the coal conveyor system and installation of water sprayers.

Regarding ambient air quality, the client's annual E&S performance report to ADB for April 2016 to March 2017 showed repeated exceedances of National Ambient Air Quality Standards (NAAQS) limits for PM₁₀ at testing locations in and around the project site as well as among neighboring communities.⁹⁸ The client also acknowledged the establishment by the Ministry of Environment, Forest and Climate Change's (MoEF&CC) Central Pollution Control Board,

Available at: <https://web.archive.org/web/20220120142411/https://www.tatapower.com/pdf/cgpl-mundra/air-report-tragadi-bunder-2014-15.pdf>. Pollutant test samples included: PM₁₀, PM_{2.5}, NO₂, SO₂, O₃, NH₃, Pb, CO, C₅H₅, BaP, As, Ni.

⁹¹ CAO 2015 CGPL-01 Monitoring Report, para. 42, p. 17.

⁹² CAO 2017 CGPL-01 Second Monitoring Report, pp. 9-10.

⁹³ CEG Test House. 2016. *Comprehensive Report of Dust Fall Measurement for M/S Coastal Gujarat Power Limited (A Tata Power Company) 4150 MW (5X830MW) Thermal Power Plant, Mundra, Gujarat (November 2104 – June 2015)*. Available at: <https://web.archive.org/web/20211206083123/https://www.tatapower.com/pdf/cgpl-mundra/dustfall-report-oct2014-jun2015.pdf>.

⁹⁴ CAO 2015 CGPL-01 Monitoring Report.

⁹⁵ TALEEM 2016 Baseline Health Study – Air Quality. While dated 2016, IFC did not file a copy of this report in its internal record-keeping system. CAO therefore was unable to consider this study during the 2015-2017 monitoring period. For the current monitoring period, CAO obtained its copy firstly from the ADB website in November 2017: <https://goo.gl/bveRcz>. Tata Power subsequently uploaded a copy to its website for public disclosure.

⁹⁶ Gujarat Pollution Control Board. 2013. *Guidelines for Coal Handling Units*. Available at: <https://goo.gl/bFj6RB>.

⁹⁷ This was confirmed during CAO's March 2025 site visit.

⁹⁸ Arcadis. 2017. *Environment & Social Performance Report: Annual Report (April 2016 to March 2017)*, p. 51. Available at: <https://www.adb.org/sites/default/files/project-documents/41946/41946-014-esmr-en.pdf> [Hereinafter 'Arcadis 2017 Annual E&S Performance Report.']. Refer to: "Appendix 11: AAQ Monitoring Results – PM₁₀." Applicable to CGPL during this period is a 2015 amendment to the *Environment Protection Rules, 1986* [amended by the Ministry of Environment, Forest and Climate Change on 7 December 2015]. Text of the amendment is available online at: <https://cpcb.nic.in/displaypdf.php?id=SW5kdXN0cnktU3BIY2lmaWMtU3RhbmRhcmRzL0VmZmx1ZW50L1RQUC5wZGY%3D>.

on December 7, 2015, of ambient air quality standards more stringent than those in the WBG's 1998 Thermal Power Guidelines. In addition, CGPL stated that a new notification issued by MoEF&CC would become effective after December 7, 2017,⁹⁹ and reported having plans in place to comply with the new standards, as conveyed to the Central Pollution Control Board and MoEF&CC.¹⁰⁰ In January 2018, ADB published a *Summary of Analysis of Ambient Air Quality and Emissions around Coastal Gujarat Power Limited Power Plant* that focused within a 10km radius of the Mundra UMPP. This report acknowledged the project's potential for air quality impact, alongside other sources.¹⁰¹

In April 2018, CAO requested:

- Quarterly (post November 2015) and annual (post 2016) ambient air quality monitoring data and reporting documents
- Copies of recent third-party reports of ambient air quality monitoring and dust-fall measurements at project-affected villages and Tragadi bundar
- Detailed methodology for how PM₁₀, PM_{2.5}, and other ambient air quality monitoring was undertaken at the bunders and other sites with no or irregular access to electricity
- Clarification of CGPL's schedule for continued monitoring.

CAO did not receive any of the requested documentation.¹⁰²

Additional Observations

CAO's 2025 field mission observed that the northern coastal region of Gujarat, particularly Kutch District and Mundra Taluka, has experienced rapid industrialization over the past 15 years, largely driven by its strategic coastal location and the establishment of the Mundra Port Special Economic Zone (MPSEZ) in 2001 by the Government of India. The area now hosts approximately 40 industrial and commercial facilities, including two major power plants—the 4,150 MW Coastal Gujarat Power Limited (CGPL) and the 4,620 MW coal-fired Adani Power plant, both of which have been operational for approximately 12 years.

The mission highlighted the importance of undertaking effective cumulative impact analysis in the region to address communities' concerns about declining environmental quality, reduced agricultural and fishery productivity, and socio-economic challenges. A key issue raised by communities and their representatives was the difficulty of attributing specific environmental and health impacts to individual facilities due to the density and diversity of industrial operations in the area.

⁹⁹ For example: Arcadis. 2018. "Appendix 7: AAQ Monitoring Results – PM₁₀ Graphical Representation of AAQ Monitoring Results," *Environment & Social Performance Report: Quarterly Report (July to September 2017)*, section 3, p. 5 [13/51]. [Hereinafter 'Arcadis 2018 ESPR Quarterly (July-September).'] Available at: https://www.adb.org/sites/default/files/project-documents/41946/41946-014-esmr-en_2.pdf.

¹⁰⁰ Arcadis 2018 ESPR Quarterly (July-September), Appendix 7, section 3 p. 5 [13/51].

¹⁰¹ CGPL. 2018 *Summary of Analysis of Ambient Air Quality and Emissions around Coastal Gujarat Power Limited Power Plant*. Available at: https://www.adb.org/sites/default/files/project-documents/41946/41946-014-emp-en_0.pdf Also refer to: CRP 2018 Third Annual Monitoring Report for the Mundra UMPP, p. 13. CRP noted that a summary of the Air Quality Study (Technical Study) was disclosed on the ADB website in March 2018 but not on the CGPL website.

¹⁰² In 2018, an ADB air quality study showed an increase in PM₁₀ concentrations in areas surrounding the Mundra UMPP of about +25% at the Tunda and Tragadi villages and +46% at Mota Kandagara over the previous 10 years (2006-2015). However, the study stated that the primary source for PM₁₀ emissions was not attributable to Mundra UMPP. The ADB's Compliance Review Panel noted that during its third and final round of monitoring, it had only received air quality monitoring data from the client's public reports to ADB, which were in graphical format and could not be evaluated for compliance. The panel expressed concerns about data quality, sampling duration, calibration of equipment, and instrument downtime, and also noted the absence of field level observations and data sampling. CRP 2018 *Third Annual Monitoring Report for the Mundra UMPP*, pp. 13-14, p.37. ADB regularly discloses information about CGPL Mundra UMPP. Available online at: <https://www.adb.org/projects/41946-014/main#project-documents>.

2.4.2 Stack Emissions

Summary of First Monitoring Period: 2013-15

During this period, the client's monitoring of stack emissions indicated compliance with World Bank Group requirements with the exception of PM₁₀, which exceeded two units for one three-month period, and SO₂ which was exceeded for one unit during one three-month period. CAO noted that reporting against the World Bank's 500 ton per day overall cap on SO₂ emissions was not provided. CAO acknowledged that the monitoring and studies conducted under the IFC Action Plan began to address several of the good practice areas identified in the Audit. However, CAO also found that the limited amount of air quality data available meant that it was not possible to reach conclusions as to whether ambient air quality requirements at specific locations were being met, and therefore kept the item open for monitoring.¹⁰³

Summary of Second Monitoring Period: 2015-2017

During this period, IFC acknowledged that the power project had been in ongoing breach of MoEF&CC standards for NO_x emitted from its stacks. IFC supervision materials from 2016 noted that the client sought and received an exemption from the NO_x and SO_x limits from the Gujarat Pollution Control Board.¹⁰⁴

Third Monitoring Period: 2017-2018

In 2018, CGPL reported that the power plant was operating within Government of India limits and IFC guidelines for both SO₂ and NO_x. The client reported SO₂ emissions consistently within the guideline of 2000 mg/Nm³ established under the WBG's 1998 *Pollution Prevention and Abatement Handbook*,¹⁰⁵ and NO_x levels typically between 300-400 mg/Nm³, within the IFC guideline of 750 mg/Nm³. The client also reported plant PM emissions within MoEF&CC and IFC limits of 50 mg/m³.¹⁰⁶ CAO notes that, although IFC had previously stated it would seek a waiver for its client from World Bank Group requirements for air emissions performance in a degraded airshed,¹⁰⁷ apparently no such waiver was granted. Accordingly, the requirement to apply offset provisions to ensure no net increase in the total emissions of particulate matter (PM) or sulfur dioxides in the airshed appears not to have been met.¹⁰⁸

The client uses electrostatic precipitators (ESPs) to control PM emissions, regulates the sulfur content of the plant fuel to control SO₂, and equips the plant with low NO_x burners to reduce NO_x emissions. In 2018, CGPL reported to CAO that stack emissions monitoring occurs

¹⁰³ See CAO 2015 CGPL-01 Monitoring Report, pp.17-18.

¹⁰⁴ The 1998 Thermal Power Guidelines allow for exemptions from offset requirements for plants that achieve emissions levels of less than 400 mg/Nm³ for sulfur oxides and nitrogen oxides. World Bank Group. 1998. "Thermal Power: Guidelines for New Plants," *Pollution Prevention and Abatement Handbook* [Effective July 1998], p. 417. Available at: <https://www.ifc.org/content/dam/ifc/doc/1990/thermnew-ppah.pdf>. Also refer to: CAO 2017 CGPL-01 Second Monitoring Report, p. 10.

¹⁰⁵ CAO notes that the Government of India NAAQS adopted more stringent limits for sulfur dioxide, at 200 mg/Nm³ for units having capacity over 500MW; oxides of nitrogen are 300 mg/Nm³; particulate matter are 50 mg/Nm³. Refer to: Ministry of Environment, Forest and Climate Change, Government of India. 2015. *Amendment to the Environment Protection Rules, 1986* [amended 7 December 2015]. Available at: <https://cpcb.nic.in/displaypdf.php?id=SW5kdXN0cnktU3BIY2lmaWVtU3RhbmRhcmRzL0VmZmx1ZW50L1RQUC5wZGY%3D>. Also refer to: World Bank Group. 1998. *Pollution Prevention and Abatement Handbook* [Effective July 1998], p. 194, "Table 1. Air Emission Requirements: Parameters and Maximum Values." [Refer to limits for "industrial estates."] Available at: <https://www.ifc.org/en/insights-reports/1990/publications-handbook-ppah--wci--1319577543003>.

¹⁰⁶ The most recent CGPL public monitoring reports are available on the ADB website, at <https://www.adb.org/projects/41946-014/main#project-documents>.

¹⁰⁷ CAO 2015 CGPL-01 Monitoring Report, p.10.

¹⁰⁸ World Bank Group Thermal Power Guidelines 1998, p. 417.

continuously and that no exceedances were identified during 2017-2018. CAO notes that good industry practice is to ensure monitoring during 99% of a plant's operating hours.¹⁰⁹

During this monitoring period, the data available to CAO on the project's stack emissions were limited to the project's public quarterly and annual E&S performance reports to ADB up to 2018.¹¹⁰ CAO requested that emissions data be captured and reported as structured time-series data and that analysis of this data distinguish between Government of Gujarat monitoring protocols and those of IFC.

Additional Observations

During its 2025 mission, CAO observed deposition of fugitive coal dust and fly ash in areas surrounding the plant, along the Tragadi port road, and in Vandh villages. Villagers from Tragadi and Kotadi bunders complained of particulates interfering in the fish drying process leading to reduced quality of dried fish. The mission observed that the "pipe-like" coal conveyor belt, constructed by CGPL to transport coal from the port to the plant was effective in containing fugitive emissions. It also observed that the conveyor belt of another facility was not designed to contain the dust. Villagers pointed to the barriers, made from cloth materials, that CGPL had constructed around coal storage areas as being effective in controlling fugitive dust when they were intact.

The CAO mission also observed that CGPL now presents real-time measurements of key parameters on an electronic public display board outside its main gates.¹¹¹ The board continuously shows real-time stack emission and ambient air quality parameters for SO₂, NO_x, PM₁₀, and PM_{2.5}.¹¹²

2.4.3 Radioactivity of Coal Ash

IFC confirmed in October 2014 that the client would test ash residue for radioactivity and heavy metals.¹¹³ IFC subsequently provided CAO with test results from the Government of India Department of Atomic Energy showing measures of radioactivity that were below the Indian clearance levels for bulk solid materials.¹¹⁴ In its 2017 Monitoring Report, CAO determined the related item under IFC's 2013 Action Plan was completed.¹¹⁵

¹⁰⁹ World Health Organization (WHO). Air Quality Guidelines Global Update, 2005, p. 278. PM 24-hour value is the 99th percentile. Refer to: IFC 2007 General EHS Guidelines: Air Emissions and Ambient Air Quality, p. 4, footnote 7. ADB-CRP third monitoring report noted in 2018 that high instrument downtime was observed for the plant's hourly data on PM, mostly due to poor support from the supplier. CRP expressed concern about the poor quality of the data on which the plant's air quality assessments are based. CRP 2018 *Third Annual Monitoring Report for the Mundra UMPP*, pp. 13-14. Available at: [https://lnadbg4.adb.org/dir0035p.nsf/attachments/Mundra%203rd%20Monitoring%20Report-For%20Web.pdf/\\$FILE/Mundra%203rd%20Monitoring%20Report-For%20Web.pdf](https://lnadbg4.adb.org/dir0035p.nsf/attachments/Mundra%203rd%20Monitoring%20Report-For%20Web.pdf/$FILE/Mundra%203rd%20Monitoring%20Report-For%20Web.pdf).

¹¹⁰ Arcadis. 2016. Environmental and Social Performance Report: Annual Report (April 2015 to March 2016): Costal Gujarat Power Limited (CGPL), Mundra, Gujarat CGPL. Available at: <https://www.adb.org/sites/default/files/project-documents/41946-014-esmr-36.pdf> [Hereinafter Arcadis 2016 Annual E&S Performance Report]; Arcadis. 2017. Environmental and Social Performance Report: Quarterly Report (January 2017 to March 2017). Available at: <https://www.adb.org/projects/documents/ind-41946-014-esmr-3>; Also refer to: Arcadis 2017 Annual E&S Performance Report.

¹¹¹ According to ADB's 2016 Monitoring Report, this display board has been reporting on key parameters as part of its environmental compliance reporting. Environmental & Social Performance Annual Report (April 2016 to March 2017) Costal Gujarat Power Limited (CGPL), Mundra, Gujarat April 2017. Available at: https://www.adb.org/sites/default/files/project-documents/41946/41946-014-esmr-en.pdf?utm_source=chatgpt.com.

¹¹² The 2025 CAO mission also observed the board reporting on other parameters such as cooling water temperatures in outfall discharges, and effluents for oil and greases.

¹¹³ 2015 Monitoring Report, p. 17, para. 41.

¹¹⁴ Refer to: *Atomic Energy Regulatory Board Directive 01/2010 [No. CH/AERB/OPSD/25125/2010/953]*. Available at: <https://www.aerb.gov.in/images/PDF/safety.dirno01-2010.pdf>.

¹¹⁵ CAO 2017 CGPL-01 Monitoring Report, p.9.

CAO Third Monitoring Period, 2017-2018: Conclusions on Air Quality Issues

CAO is not assured that the actions taken by IFC address the Audit's findings with respect to air quality and stack emissions.

While IFC committed to work with the client to address air quality concerns raised by the complainants, including carrying out ambient air quality monitoring, inspections to assess coal and ash dust deposition, fugitive emissions controls, and testing, complainants continue to report concerns about air emissions affecting public health and fishery production. As CAO observed during its field mission, the region has experienced air quality concerns associated with widespread industrial development, making attribution challenging. However, IFC did not provide sufficient information and analysis to demonstrate how its efforts under the Action Plan addressed the concerns of complainants, including regarding the finite assimilative capacity of the airshed, and complied with PS3 requirements.

2.5 Complaint Issue: Marine Impacts

The CGPL-01 complaint raised concerns that construction and operation of the Mundra power plant's once-through cooling system would harm the marine environment, including by destroying mangrove forest and dredging Kotadi and Modhva creeks. The complainants noted that the project's 2007 Rapid Marine Environmental Impact Assessment did not accurately account for local livelihoods, such as the viability of shore-based fishing activities and availability of high-value lobsters. They attributed declines in fish and lobster catches at the time of their complaint to the construction of the nearby Adani Power Plant and associated port developments, and expressed concern about chemical contamination in the CGPL plant's outfall channel and risks to fish fry and juveniles posed by the intake channel.¹¹⁶ The analysis below cover the following issues related to marine impact: thermal plume (section 2.5.1), biodiversity assessment and monitoring (section 2.5.2), turtle monitoring (section 2.5.3), and collection of primary and secondary fish catch data (section 2.5.4).

Relevant IFC Standards

Central to IFC's development mission is the commitment to carry out investment operations "in a manner that 'does no harm' to people or the environment" and to ensure that negative impacts are avoided where possible.¹¹⁷ Where impacts are unavoidable, IFC's Sustainability Policy requires that they are "reduced, mitigated or compensated for appropriately."¹¹⁸

The loan agreements that IFC made with CGPL committed the client to uphold the World Bank's 2007 *General EHS Guidelines: Environmental Wastewater and Ambient Water Quality*.¹¹⁹ These guidelines recognize that utility operations may result in high rates of water consumption and potentially release high temperature water containing high levels of dissolved solids and residues of biocides and anti-fouling agents, among other pollutants. In response, operators are advised to adopt water management strategies "to ensure the discharge water temperature does not result in an increase greater than +3°C of ambient temperature at the edge of a scientifically established mixing zone which takes into account ambient water quality, receiving water use, potential receptors and assimilative capacity among other considerations."¹²⁰

¹¹⁶ CAO 2013 Audit of CGPL, pp. 22-23.

¹¹⁷ IFC. 2006. *International Finance Corporation's Policy on Social & Environmental Sustainability*, para. 8. Available at: <https://www.ifc.org/content/dam/ifc/doc/2000/2006-ifc-sustainability-policy-en.pdf>. [Hereinafter 'IFC 2006 Sustainability Policy.']

¹¹⁸ IFC 2006 Sustainability Policy, para. 8.

¹¹⁹ Refer to: IFC. 2007. "General EHS Guidelines: Environmental Wastewater and Ambient Water Quality [April 30, 2007].," *Environmental, Health, and Safety (EHS) Guidelines*. Available at: <https://www.ifc.org/content/dam/ifc/doc/2000/2007-general-ehs-guidelines-en.pdf>. [Hereinafter 'IFC 2007 General EHS Guidelines: Water Quality.']

¹²⁰ Refer to the section 'Wastewater from Utilities Operations,' p. 28. IFC 2007 General EHS Guidelines: Water Quality.

CAO Non-Compliance Findings

CAO's 2013 Audit found that IFC's pre-investment due diligence of the client's marine impact assessments was not commensurate to the project's risks and did not adequately account for the differing values attached to biodiversity by specific stakeholders.¹²¹ The CAO complainants represent groups that depend on the local marine environment for their livelihoods and who claim customary attachments to land and resources in the project area of influence. These groups comprise both the seasonal residents of Kotadi and Tragadi bunders, who identify as religious and ethnic minorities, and nearby villagers who customarily use the area for foot and boat fishing. CAO noted that none of the assessments conducted for project due diligence—a Rapid Marine Environmental Impact Assessment (RMEIA) and Comprehensive EIA in 2007, and a Marine EIA in 2009—focused on the marine-based livelihoods of these fishing communities or the potential associated consequences of project-induced change.¹²²

In addition, CAO concluded that IFC did not adequately assure itself that the thermal plume from the coal-fired power plant's cooling water outfall would comply with the relevant +3°C criterion for water temperature at the edge of a scientifically defined mixing zone.¹²³ Instead, IFC missed the opportunity to: (a) request more detailed baseline information about the marine environment of the affected area; (b) incorporate appropriate analysis of the project's potential marine (and associated social) impact into design considerations and CGPL's E&S management system; and (c) develop a framework for adequate marine impact monitoring.

In response to CAO's findings, IFC's 2013 Action Plan committed to undertaking studies to assess project impacts on the local marine environment, namely:¹²⁴

- A model confirmation study to be conducted by the National Institute of Oceanography (NIO) and validated by another independent or government agency
- A biodiversity assessment study incorporating broad biodiversity monitoring (mangroves, lobster breeding areas, and other key relevant habitats and species) in the area impacted by elevated temperatures from the thermal plume, to be conducted by Bombay Natural History Society (BNHS) or another expert third party
- Monitoring of turtle presence and nesting by BNHS
- Collection of primary and secondary fish catch data.

The following sub-sections examine the project's marine impact and associated IFC/client actions by issue:

¹²¹ CAO 2013 Audit of CGPL, p. 19. Refer also to IFC. 2006. *Performance Standard 6: Biodiversity Conservation and Sustainable Natural Resource Management*, para. 4. Available at: <https://www.ifc.org/content/dam/ifc/doc/2000/2006-ifc-performance-standards-en.pdf>. [Hereinafter 'IFC 2006 PS6.']. Also refer to: BNHS India. 2010. *Coastal Biodiversity Assessment and Benchmarking at Coastal Gujarat Power Ltd.* Available at: <https://www.tatapower.com/content/dam/tatapoweraemsitesprogram/tatapower/pdf-root/sustainability/environmental-compliance/tata-power,-mundra/CGPL-mundra-coastal-biodiversity.pdf>.

¹²² CAO 2013 Audit of CGPL, pp.29-30.

¹²³ Refer to the section 'Wastewater from Utilities Operations,' p. 28. IFC 2007 General EHS Guidelines: Water Quality.

¹²⁴ IFC 2013 Action Plan, pp. 1-2.

2.5.1 Thermal Plume

Summary of First and Second Monitoring Period: 2013-2017

During CAO's first monitoring period (2013-2015), IFC provided CAO with an environmental impact assessment (EIA) report for a proposed project capacity expansion,¹²⁵ which stated that the project had no impacts on the marine environment.¹²⁶

However, to meet commitments under IFC's the 2013 Action Plan, CGPL commissioned two reports from the National Institute of Oceanography (NIO) to assess the impacts of the power plant's thermal plume.¹²⁷ IFC noted in October 2014 that the outcome of these studies would determine whether additional actions were required to meet the Performance Standards (2006) with respect to the plume's impacts on marine ecology. NIO's studies aimed to establish thermal dispersion from the discharge mouth and temperature variations in and around the outfall channel due to cooling water from the plant by direct measurement, as well as confirm model behavior through field monitoring. NIO calculated that near ambient temperatures were attained around 600 meters from the outfall channel during April 2015 and did not identify potential for significant adverse marine impacts.¹²⁸

However, the NIO studies did not address CAO's Audit findings regarding gaps in IFC's review of the original marine impact assessment nor did they address the requirement to establish a "scientifically established mixing zone" for warm water outfall under the IFC General EHS Guidelines governing the project.¹²⁹

Third Monitoring Period, 2017-2018

In 2015, MoEF&CC issued changes in water consumption requirements for thermal power plants, which had implications for the project's thermal plume.¹³⁰ These requirements specified that plant operators take action within two years of the notification date. However, during this monitoring period, IFC provided CAO with no new information on the project's marine impacts and no update about plans to comply with, or seek a waiver from, the 2015 MoEF&CC requirements.¹³¹

¹²⁵ TCE 2013 EIA – Capacity Expansion.

¹²⁶ TCE 2013 EIA – Capacity Expansion, pp. x, 26, 30, 109.

¹²⁷ 2014: *Model Conformity Study and Monitoring for Condenser Cooling Water Discharge from CGPL in the Coastal Waters of Mundra*; 2016: *Model Conformity Study and Monitoring for Condenser Cooling Water Discharge from CGPL in the Coastal Waters of Mundra During Premonsoon*.

¹²⁸ CAO 2017 CGPL-01 Second Monitoring Report, p. 10-11; NIO, *Model Conformity Study and Monitoring for Condenser Cooling Water Discharge from CGPL in the Coastal Waters of Mundra During Premonsoon*, p. 71.

¹²⁹ CAO 2017 CGPL-01 Second Monitoring Report, p. 10; Original marine impact studies include: Tata Consulting Engineers. 2007. *Comprehensive Environmental Impact Assessment Study Report for 4000MW Imported Coal Fired Mundra Ultra Mega Power Project*; and National Institute of Oceanography. 2007. *Rapid Marine Environmental Impact Assessment for Ultra Mega Power Project Near Mundra*. Both studies are available via IFC's ESRS page for CGPL: <https://disclosures.ifc.org/project-detail/ESRS/25797/tata-ultra-mega>. Refer also to IFC 2007 General EHS Guidelines: Water Quality, "Wastewater from Utilities Operations," p. 28.

¹³⁰ Ministry of Environment, Forest and Climate Change, Government of India (MoEF&CC). 2015. Notification S.O. 3305(E). *Amendment to the Environment Protection Rules, 1986*. Available at: <https://cpceb.nic.in/displaypdf.php?id=SW5kdXN0cnktU3BIY2lmaWMTU3RhbmRhcmRzL0VmZmx1ZW50LzQyNS5wZGY=>

¹³¹ ADB-CRP's 2018 monitoring report also raised reservations about NIO's methodology and results, noting that the model failed to measure impacts on the nearshore areas of Tragadi bunder and the Modhva shoreline west of the outfall channel and that the number of measurement points was insufficient to establish the temperature impacts. CRP's 2018 monitoring report noted that their own technical experts designed a program for additional monitoring and measurement to further define both the extent of the elevated temperature zone as a result of cooling water discharge and the ecological impacts on nearshore marine environment. The client later informed CRP that it was not prepared to carry out additional monitoring or share monitoring data. With the help of a specialized consultant, ADB staff prepared an *Assessment of Impact of Thermal Discharge from Coastal Gujarat Thermal Power Plant Using Satellite Imagery*, including a comparison of findings with field surveys and NIO modelling. These satellite imageries revealed temperature in excess of the ambient value during the three high tide cases observed. Derived temperature in the outfall channel, and the entire Modhva shoreline and the Tragadi bunder area, showed temperatures about 6°C above ambient level. Moreover, the thermal plume across the outfall channel and into the Modhva creek during high tides appeared more pronounced in ADB's images than modelled by NIO. In summary, the satellite imagery study indicates that the Modhva shoreline likely suffers significant thermal impacts. Moreover, CRP reported severe challenges in gaining access to client

2.5.2 Biodiversity Assessment and Monitoring

Summary of First Monitoring Period: 2013-2015

During this period, IFC provided CAO with documentation on a client partnership with IUCN to conduct a biodiversity assessment and reported that it provided feedback on the terms of reference (ToR). IFC stated that this partnership would develop a site-specific protocol on biodiversity and ecosystem services management as part of CGPL's program to assess and mitigate marine impacts. CAO's own review of the ToR found that the biodiversity mapping study had the potential to address some issues raised in the complaint but noted that the partnership's scope was unclear—particularly with respect to fulfilling Performance Standards (2006) requirements, including under PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.¹³²

Also during this period, two studies found no potentially significant adverse impacts on fisheries or mangroves from the power plant.¹³³ These studies were a client-conducted EIA for the proposed project capacity expansion,¹³⁴ and the NIO's 2014 Model Conformity Study which provided relevant data and assessment of project-related environmental impacts.¹³⁵

Summary of Second Monitoring Period: 2015-2017

During this period, CGPL published a statement on project commitments to biodiversity.¹³⁶ IUCN and the client announced their partnership to review existing biodiversity management approaches, develop site-specific biodiversity and ecosystem services protocols, and build company capacity to implement the protocols.¹³⁷

Third Monitoring Period, 2017-2018

During 2017–2018, IFC provided no further information to CAO about the IUCN biodiversity assessment, efforts to validate the *NIO Model Confirmation Study*, or biodiversity monitoring. As a result, CAO is not able to determine whether these efforts progressed or addressed the biodiversity concerns raised by the complainants.¹³⁸

2.5.3 Turtle Monitoring

Summary of First Monitoring Period: 2013- 2015

In 2014, IFC reported that the Bombay Natural History Society (BNHS) completed a study of endangered green turtles (*Chelonia mydas*) as part of its assessment of the project's impact on biodiversity and endangered species.¹³⁹ This study suggested that green turtles are present

data for performance monitoring and impact analysis related to marine impacts. CRP 2018 Third Annual Monitoring Report for the Mundra UMPP, p. 7.

¹³² CAO 2017 CGPL-01 Second Monitoring Report, pp. 10-11. Refer also to: IFC 2006 PS6.

¹³³ NIO 2014 Model Conformity Study – Discussion of impacts to mangroves in section 4.5.1; fisheries addressed in section 4.5.5. TCE 2013 EIA – Capacity Expansion – Discussion of impact to mangroves pp. 92, 238, 359; fisheries addressed in Annexure-2 220.

¹³⁴ TCE 2013 EIA – Capacity Expansion, pages vi-ii, x, xv, 9,33, 80, 92, 111, 112, 117, 125, 191, 211, 359, 561-562.

¹³⁵ NIO 2014 Model Conformity Study – 'Biodiversity' is mentioned only once in the report, p. 30.

¹³⁶ CGPL. 2015. *Tata Power Mundra UMPP: Towards a cleaner & greener future*. No longer available on Tata's website. <https://web.archive.org/web/20181205180030/https://www.tatapower.com/pdf/cgpl-mundra/umpp-greener-future121015.pdf>

¹³⁷ Also refer to the IUCN media statement, "IUCN and TATA Power partnership", available at: <https://web.archive.org/web/20181205180215/https://www.iucn.org/asia/countries/india/iucn-and-tata-power-partnership>.

¹³⁸ In 2025, IFC shared with CAO the last update shared by CGPL, which stated that the NIO had undertaken model confirmation studies, including collecting experimental fishing data. That update also stated that modeling confirmed that near-ambient ocean water temperature and quality conditions could be expected to be attained 1-1.2km from the channel mouth (vs 3km predicted originally). The communication shared by IFC did not include the model confirmation studies.

¹³⁹ Bombay Natural History Society. 2014. *Annual Report - 2013-2014 Sea Turtle Monitoring Project Phase – II*.

in the project area in low numbers.¹⁴⁰ IFC and the client noted that sea turtle studies were ongoing with a third phase of monitoring scheduled to conclude in January 2018.¹⁴¹

Summary of Second Monitoring Period: 2015-2017

CAO's 2015 monitoring report noted that sea turtle monitoring was not conducted as part of the project's original baseline studies and the ongoing BNHS studies did not appear to be structured as an assessment of project-related impacts on the local sea turtle population.¹⁴²

Third Monitoring Period, 2017-2018

IFC provided CAO with no new information on turtle monitoring during the final 2017–2018 monitoring period. The results of the monitoring program are unknown and it is not clear whether the program has concluded.¹⁴³

2.5.4 Fish Catch Data Collection

IFC and its client shared with CAO the results of fish catch studies carried out at Tragadi bunder during CAO's second monitoring period (2015-2017; see section 2.1).¹⁴⁴ CAO received no further updates from either party on primary and secondary fish catch data collection, impact assessment, and monitoring.¹⁴⁵

Third Monitoring Period, 2017-2018: Conclusions on Marine Impacts

While IFC supported its client to undertake additional studies to address gaps in the EIA on risks and impacts to the marine environment, it is not clear that these addressed the concerns of the complainants.

As a result, there is no basis for CAO to conclude that IFC undertook adequate steps to assure itself that the project's marine impacts have been adequately identified and mitigated consistent with PS6. CAO finds that the scope of work and methodology used meant that the studies undertaken as part of the Action Plan did not provide data adequate to assess potential impacts to biodiversity and fish availability.¹⁴⁶

Additional Observations

During CAO's 2025 field mission, villagers reaffirmed their views that the populations and diversity of fish species have declined, including but not limited to high value catches such as lobster. They also claimed that mangroves covering some of the coastal areas have substantially declined, affecting fish production. CAO also heard from villagers about reported

¹⁴⁰ In 2025, IFC shared with CAO the last update shared by CGPL, which stated that the study did not find any evidence of sea turtle crawling or nesting in the three-phase study undertaken from 2012.

¹⁴¹ CAO 2017 CGPL-01 Second Monitoring Report, p. 11.

¹⁴² CAO 2015 CGPL-01 Monitoring Report, para. 57, p. 19.

¹⁴³ In 2025, IFC shared with CAO the last update shared by CGPL, which stated that the Bombay Natural History Society had completed a biodiversity assessment and turtle monitoring which showed no evidence of sea turtle crawling or nesting. The communication shared by IFC did not include the biodiversity assessment.

¹⁴⁴ Aakar. 2014. *Impact of CGPL project on habitation, life, and livelihoods of fisherfolk at Tragadi bunder*. This document is not publicly available. Aakar Empowerment's website is available at: <https://aakarempowerment.com/activities-of-aakar/#1461237341142-2be8b7e8-7cf6>.

¹⁴⁵ During CAO's March 2025 field visit, complainants provided CAO with data collected by one of the companies that purchases dried fish from the local fishing communities including the complainants. This data indicates a clear decline in fish catch, particularly for higher value species, over the last several years, consistent with information from the complainants. However, it is not possible to attribute this reduction in catch or species composition to the project. It is almost certainly the result of a combination of habitat degradation (in part due to the project), pollution (possibly in part due to the project), and over-fishing.

¹⁴⁶ The information collected during the March 2025 CAO site visit, while limited to information from the complainants and observations around the project environments, combined with review of satellite imagery time series, confirms the direct project impact in relation to the concerns of CGPL-02 complainants regarding dredging, erosion, and loss of sand dunes and likely on fish death at the plant's cooling water intake as well as loss of turtle and fish spawning/rearing habitat.

loss of fish fry and other aquatic organisms due to the intake screening process for the plant's cooling water system.

Complainants reported to the CAO team that industrial activities, including increased maritime traffic and new onshore developments such as airstrips and industrial fencing, as well as erosion near the outfall channel have restricted their access to fishing grounds.

Because of reduced catch (both quantity and quality in nearshore waters), fisherfolk are now venturing up to 10km offshore to sustain their livelihoods. Data shared by the fishing cooperative documents a decline in annual fish catch, in kilograms, at Tragadi Bundar from 2013 to 2024 as follows: Bumla (Bombay Duck) 80% decline; Madeli (Anchovy) 70% decline; Khatar 40% decline; small prawns 65% decline, large prawns 33% decline, and Bhushi (fingerlings) 14% decline. The decline of fish catch at the Kotadi Bundar follows a similar trend. Fisherfolk also reported that high value fish catches are now negligible or rare, citing lobster, Ghol fish (black spotted croaker), Dhangri (Asian sea bass), chaval, and Surmai (Seer fish). The loss and/or degradation of the region's mangroves and coastal ecosystems more generally contribute to the decline in fish populations and consequently in yields.

2.6 Complaint Issue: Cumulative Impacts

The CGPL-01 complaint alleged inadequacies in the project's assessment of cumulative impact and third-party risk, particularly considering the project's association with the Adani Power Project, Mundra port, and Special Economic Zone.

Relevant IFC Standards

Performance Standard 1 requires clients to assess "cumulative impacts from further planned development of the project, any existing project or condition, and other project-related developments that are realistically defined at the time the Social and Environmental Assessment is undertaken."¹⁴⁷ Performance Standard 3: Pollution Prevention and Abatement requires clients to mitigate potential cumulative impacts for projects with the potential for adversely impacting existing ambient conditions, including potential cumulative impacts with uncertain and irreversible consequences.¹⁴⁸

IFC's 2007 Guidance Note 1: *Social and Environmental Assessment and Management Systems* (GN1) states that: "IFC will work with the client to identify existing data and studies, and if necessary, will consider available technical and financial assistance mechanisms on a case-by-case basis. In situations where cumulative impacts are likely to occur from activities by third parties in the project region, a regional or sectoral assessment may be appropriate."¹⁴⁹ When the need for such assessments is indicated, IFC must work with the client to identify existing data and studies conducted by other institutions. In the absence of such data or studies, IFC will assist the client to identify the appropriate terms of reference for such assessments and will consider available technical and financial assistance mechanisms.¹⁵⁰

¹⁴⁷ PS1: Social and Environmental Assessment and Management Systems provides that the area of influence does not include potential impacts that would occur without the project or independently of the project.

¹⁴⁸ IFC 2006 PS3, para. 9. IFC examples of cumulative impacts include those to air, surface and groundwater, and soils.

¹⁴⁹ IFC's 2007 Guidance Note 1: *Social and Environmental Assessment and Management Systems* (GN1), para. G16, p. 7. GN1 provides for regional assessment when a project or series of projects are expected to have a significant regional impact or influence regional development (e.g., an urban area, a watershed, or a coastal zone) and for sectoral assessment where several projects are proposed in the same or related sector (e.g., power, transport, or agriculture) in the same country. These assessments pay particular attention to potential cumulative impacts. Regional, Sectoral or Strategic Assessments, paras. G31, G32, available at: <https://www.ifc.org/content/dam/ifc/doc/2000/2007-ifc-performance-standards-guidance-note-en.pdf>.

¹⁵⁰ IFC 2007 GN1, para. G32.

In addition, IFC's 2013 *Good Practice Handbook Cumulative Impact Assessment and Management* introduced the concept of cumulative impacts and gives examples for project scoping and analysis using a methodology of "valued social components" based on community engagement.¹⁵¹

CAO Non-Compliance Findings

CAO's 2013 compliance Audit found that IFC's pre-investment E&S due diligence of the planned power plant did not ensure that risks and impacts were analyzed in the context of its area of influence as required by PS1, particularly in relation to "cumulative project impacts realistically defined at the time of the E&S risk assessment."¹⁵² Specifically, project-related cumulative risks to air and the marine environment were not adequately considered during the impact assessment process. Potential third-party E&S risks related to the project's proximity to and association with the Adani power plant, Mundra port, and Special Economic Zone were not considered.¹⁵³ CAO called for cumulative impacts to be better assessed and mitigation measures developed commensurate to the client's level of influence.¹⁵⁴

In response, IFC's 2013 Action Plan committed to upgrading the project E&S impact assessment in accordance with the Performance Standards (2006), including assessment of third-party risks and cumulative impacts.¹⁵⁵ IFC also noted to CAO that CGPL lacked the influence and control to affect impacts related to broader coastal zone development.¹⁵⁶

Summary of First Monitoring Period: 2013-2015

During this period, complainants asserted that IFC and its client had taken no action to address the cumulative impacts of the client's operations. They recommended that IFC establish an independent body to assess such impacts and develop a mitigation plan.¹⁵⁷ IFC informed CAO that any further assessment of cumulative impacts would be carried out in the context of future impact assessment studies for the planned expansion of the plant capacity.

Summary of Second Monitoring Period: 2015-2017

During this period, the client informed CAO that the planned capacity expansion had been postponed indefinitely.¹⁵⁸

Third Monitoring Period, 2017-2018

During this period, CAO received no documentation from IFC regarding the consideration of cumulative impacts and project exposure to third-party risk in relation to airshed, marine environment, and community health and safety in response to complainant concerns and CAO's Audit findings. There is no information to confirm that the client undertook the planned cumulative impact analysis following the cancellation of the expansion project.

¹⁵¹ International Finance Corporation. 2013. *Good Practice Handbook Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets*. Washington, DC.: World Bank. Available at: <https://openknowledge.worldbank.org/entities/publication/9117a520-430f-58ec-b699-a2817f8a548f>.

¹⁵² CAO 2013 Audit of CGPL, pp. 4-5, citing IFC 2006 PS1, para. 5.

¹⁵³ CAO 2013 Audit of CGPL, pp. 25, 51. Adani Power Plant (with which CGPL shares a cooling water intake channel, and which impacts the same airshed); Mundra Port and Special Economic Zone (MPSEZ), in particular the West Port, which is used to unload coal for the two power plants.

¹⁵⁴ CAO 2013 Audit of CGPL, p. 43.

¹⁵⁵ IFC 2013 Action Plan p. 2. Refer also to: IFC. 2013. *IFC Response to CAO's Audit Report on IFC's Investment in Coastal Gujarat Power Limited (CGPL) India* [September 12, 2013], para. 7(j) pp. 8-9. Available at: <https://www.cao-ombudsman.org/sites/default/files/downloads/IFCresponsetoCAOAudit-CoastalGujaratPowerLimited.pdf>.

¹⁵⁶ IFC. 2013 Response to CAO's Audit, p. 9.

¹⁵⁷ CAO 2015 CGPL-01 Monitoring Report, para. 65, p. 20.

¹⁵⁸ CAO 2017 CGPL-01 Second Monitoring Report, p. 11.

CAO Third Monitoring Period, 2017-2018: Conclusions on Cumulative Impacts

CAO is not assured that IFC took actions under the Action Plan to address the Audit non-compliance findings with respect to assessing and addressing cumulative impacts.

CAO finds that there is no information available to indicate that IFC took action to address CAO's findings regarding cumulative impact and third-party risk as they relate to the potential marine and associated social impacts raised by complainants.

IFC did have an opportunity to examine the cumulative impacts of the project as part of an effort led by the Ministry of Environment, Forests and Climate financed by IBRD as well as additional studies on integrated coastal management in the region.¹⁵⁹ However, it is not clear that IFC made efforts to support its client to engage in these efforts.

Additional Observations

CAO's 2025 mission observed that most concerns raised by local communities likely stem from the cumulative environmental impacts associated with industrial development in the region rather than from a single project. The cumulative environmental impacts of industrialization have resulted in declining environmental quality, reduced productivity, and socio-economic hardships for local communities. Key concerns include deteriorating air quality affecting public health and agricultural and fishery production, coastal ecosystem degradation impacting fisheries, and groundwater salinity intrusion reducing access to safe drinking water and irrigation. Additionally, the Gulf of Kutch is highly vulnerable to climate risks, including sea level rise, more frequent and intense cyclones, storm surges, flooding, droughts, and heat waves, exacerbating the current conditions these communities face.

2.7 Complaint Issue: Project Supervision

The CGPL-01 complaint questioned the adequacy of IFC's supervision of its client's E&S performance in the development and operation of the large-scale coal-fired power plant.

Relevant IFC Standards

IFC's Sustainability Policy requires project monitoring and supervision through site visits, review of project performance on the basis of the client's commitments in the Environmental and Social Action Plan (ESAP), and, where relevant, client engagement on performance-improvement opportunities or actions to ensure project compliance.¹⁶⁰ The Sustainability Policy also requires IFC to exercise remedies for non-compliance when appropriate.¹⁶¹

Performance Standard 1 requires a project's Social and Environmental Management System to incorporate social and environmental assessment, a management program,

¹⁵⁹ Refer to: Government of India, Ministry of Environment, Forests and Climate Change. 2015. Annual Report 2014-2015. Available at: <https://moef.gov.in/uploads/2018/04/EnvironmentAnnualReportEng..pdf>; World Bank (IBRD). 2009. Integrated Coastal Zone Management Project. Environmental and Social Impact Assessment. <https://web.archive.org/web/20231215215731/https://documents1.worldbank.org/curated/pt/108221468041478690/pdf/IPP3880P0979850Box345545B01PUBLIC1.pdf>. Other relevant studies include National Centre for Sustainable Coastal Management and Gujarat Ecology Commission Gandhinagar. 2014. Gulf of Kachchh: A Framework for the Cumulative Environmental Impact Assessment [5-6 September 2013]. Available at: <https://ian.umces.edu/publications/gulf-of-kachchh-a-framework-for-the-cumulative-environmental-impact-assessment/>; University of Greenwich and Gujarat Institute of Desert Ecology (GUIDE). 2016. Natural Character Area profile: Coastal Plain of Kachchh District https://gala.gre.ac.uk/id/eprint/16221/1/16221%20BARTLETT_Coastal_Plain_of_Kachchh_2016.pdf; Also noteworthy is the work of Gujarat Ecological Education and Research (GEER) Foundation, which looks at issues of cumulative impacts assessment at operational levels.

¹⁶⁰ IFC 2006 Sustainability Policy. In this context, 'Action Plan' refers to the PS1 requirement for a project-level action plan (as differentiated from the IFC and CGPL 2013 remedial 'Action Plan').

¹⁶¹ IFC 2006 Sustainability Policy, p. 2, para. 26.

organizational capacity and training, community engagement, monitoring, and reporting.¹⁶²

2.7.1 Project-level E&S Supervision and Monitoring Framework

In the 2013 Action Plan, IFC and the client agreed to prepare a comprehensive document detailing each E&S project requirement, including for the operational phase. IFC informed CAO in October 2014 that the client was working on this document. In February 2016, IFC and the client provided CAO with a broader status review matrix summarizing project compliance with E&S requirements.¹⁶³ CAO's 2017 Monitoring Report concluded that this matrix failed to provide comprehensive E&S requirements and did not constitute an adequate monitoring and evaluation framework for project-level E&S issues in a format that could be effectively monitored or audited in conformity with the Performance Standards (2006).¹⁶⁴

Between May 2014 and July 2017, IFC reported to CAO on progress in operationalizing commitments in the 2013 Action Plan.¹⁶⁵ In 2018, the client reported a summary list of actions which showed all remedial measures under the plan to be 'completed' as of January 2018.¹⁶⁶ CAO received no further updates from IFC or the client with regard to a consolidated list of project-level E&S responsibilities and commitments.

2.8 Additional Issues Raised in the CGPL-02 Complaint: Impacts Related to Security Forces and Project Infrastructure Safety

In September 2017, CAO merged a complaint filed in 2016 regarding IFC's investment in CGPL (CGPL-02) with the ongoing monitoring process for CGPL-01. Both complaints raised similar concerns regarding the adequacy of IFC's actions to ensure its client's adequate assessment and management of the power plant's impacts on the marine environment, as well as impacts related to physical and economic displacement. In addition, the CGPL-02 complaint raised two new concerns regarding IFC's supervision of its client's E&S risk management measures. The complainants from Tragadi bunder alleged poor safety of project infrastructure, citing inappropriate maintenance of fences around the intake and outfall channel, as well as harassment and abuse by security forces. Since these issues were not part of CAO's 2013 Audit, IFC did not include actions to address them in its 2013 Action Plan. From 2017, CAO monitored IFC's efforts to address these issues as part of its supervision of CGPL under the Action Plan, as summarized below.

2.8.1 Use of Security Forces

Performance Standard 4: Community Health, Safety, and Security (PS4) requires IFC clients to assess the risks posed by security arrangements to those within and outside the project site. PS4 seeks to ensure that security forces are not implicated in past abuses and that security personnel are adequately trained in suitable conduct toward the local community. PS4 also encourages clients to engage with public security forces, assess the risks they pose, and seek opportunities to collaborate in mitigating those risks.

The CGPL-02 complaint raised concerns about the actions of security personnel assigned to the project. During CAO's compliance appraisal, IFC conveyed to CAO that it had identified PS4 applicability and prepared a security risk assessment and management plan in April 2008. At that time, however, the client anticipated using only private security forces to guard project

¹⁶² IFC 2006 PS1, p.1, para 3.

¹⁶³ IFC and CGPL. 2016. *Status of CGPL's Compliance to IFC's Environmental and Social Requirement During Pre-Operation Phase & Operation Phase*.

¹⁶⁴ CAO 2017 CGPL-02 Appraisal Report, p. 12.

¹⁶⁵ IFC provided monitoring updates to CAO in May 2014, October 2014, December 2014, March 2015, July 2015, April 2016, and July 2017. Refer also to: CAO 2017 CGPL-01 Second Monitoring Report, para. 6, p. 6.

¹⁶⁶ IFC and CGPL 2018 Management and Monitoring Plan.

facilities. Public news sources from 2015 report that the Government of India deployed over 250 Central Industrial Security Force (CISF) security personnel that year to CGPL to provide anti-terrorist and anti-sabotage duties.¹⁶⁷ In July 2016, India's Minister of Home Affairs issued a report acknowledging that 99 CISF personnel had been approved for deployment at the site.¹⁶⁸ IFC stated to CAO that the national intelligence agency may have undertaken a risk analysis to plan their CISF deployment at Mundra UMPP. However, CAO found no evidence that IFC took steps at the time to ensure itself that the client undertook a risk analysis or that it revised its security management plan in response to this change in security force personnel.

During CAO's compliance appraisal, IFC also reported that an altercation between CISF guards and local fishermen in 2015 was resolved in cooperation with the client's social team, the affected villagers, police, and the local administration. The village *Sarpanch* (elected head of the *Panchayat*) acted as mediator. IFC added that the villagers agreed to withdraw their police complaint over the incident and complainants reported to CAO that CISF personnel had apologized to the affected individuals.¹⁶⁹

CAO received no documentation from IFC in 2017-2018 regarding the client's engagement with affected communities about the role of CISF or of any other project-community engagement on security arrangements. Nor did IFC provide CAO with documentation to substantiate that it maintained a register of security incidents at the plant.

2.8.2 Safety of Project Infrastructure

The CGPL-02 complainants also expressed concerns about the safety of project infrastructure, specifically the risk of people and animals falling into the plant's outfall channel. PS4 requires clients to evaluate the risks and impacts to the health and safety of the affected community during project design, construction, operation, and decommissioning and to establish preventive measures in a manner commensurate with the identified risks and impacts. During CAO's compliance appraisal of the complaint, IFC reported that the client had installed barbed wire fencing around the outfall channel, but that local people occasionally cut the wire to gain access for fishing. IFC also reported that the client had proactively engaged local community members about the dangers of fishing in the outfall channel. In 2018, IFC and CGPL reported regular maintenance of the fencing surrounding the outfall channel. However, CAO received no supporting documentation from IFC regarding any of the information above.

¹⁶⁷ PTI. 2015. "Government sanctions 500 CISF men for Tata projects in Gujarat, Odisha," *The Economic Times* (September 24, 2015). Available at: <https://economictimes.indiatimes.com/news/defence/government-sanctions-500-cisf-men-for-tata-projects-in-gujarat-odisha/articleshow/49090894.cms>.

¹⁶⁸ Ministry of Home Affairs, Government of India. 2016. Lok Sabha Unstarred Question No. 450 to be Answered on the 19th of July 2016/ Ashadha 28, 1938 (Saka): 2. Available at: <https://sansad.in/getFile/loksabhaquestions/annex/9/AU450.pdf?source=pqals>.

¹⁶⁹ CAO 2017 CGPL-02 Appraisal Report, pp. 16-18.

4. 2017–2018 CAO Monitoring: Conclusion

This third and final monitoring report assessed IFC's actions during 2017-2018 to address the environmental and social non-compliance findings identified in CAO's 2013 Audit of the Coastal Gujarat Power Limited project. CAO's monitoring focused on IFC's response to concerns raised by local fishing communities regarding the 4,150MW coal-fired power plant's impacts on their livelihoods, health, and the environment.

Summary of Key Compliance Monitoring Findings: 2017-2018

During the 2017-2018 monitoring period, IFC continued to work with its client to undertake various studies and initiatives to address CAO's 2013 Audit findings. While these efforts demonstrated engagement with the issues raised, CAO's monitoring found that they did not resolve the identified non-compliances identified in the Audit or address the concerns raised by the complainants, as follows:

1. Environmental & Social Impact Assessment: CGPL commissioned a third-party socioeconomic survey in 21 villages and a separate livelihood study. While the survey and study present an account of socio-economic circumstances, there is no evidence that they documented the project's impact on fishing communities, particularly the seasonally-resident fishing community at Tragadi and Kotadi bunders.

2. Community Consultations: IFC stated that its client established Village Development Advisory Committees and reported regular community engagement. Nevertheless, complainants maintain that they were not meaningfully consulted, and documentation of effective engagement with all affected groups was insufficient. Furthermore, the complainants continue to assert that they did not receive access to the various studies produced under IFC's 2013 Action Plan.

3. Land Acquisition and Economic Displacement: The client commissioned a livelihood improvement plan for 24 identified pagadiya fishers. However, the selection criteria used to identify affected fishers was exclusionary, and the broader issues of economic displacement remained unaddressed by IFC and its client.

4. Air Quality: IFC reported that its client implemented mitigation measures including upgrading the plant's coal conveyor system, installing water sprinklers for dust suppression, and maintaining a public display of air quality data. However, repeated exceedances of PM10 standards were recorded at other locations, and CAO notes that offset requirements for degraded airsheds appear not to have been met.

5. Marine Impacts: IFC reported that CGPL commissioned model confirmation studies by the National Institute of Oceanography and initiated partnerships with IUCN for biodiversity assessment. CAO acknowledges that these studies provided additional data, but concludes that they did not establish the scientifically defined mixing zone required by IFC's EHS guidelines or adequately assess project impacts on marine biodiversity and fish availability.

6. Cumulative Impacts: IFC and its client committed to conduct a cumulative impact assessment under the Action Plan as part of the proposed expansion of the plant. However, the expansion did not take place and CAO found no evidence that the assessment was undertaken.

7. Project Monitoring: Project documentation detailing CGPL's compliance with IFC's E&S standards did not include all the non-compliances raised in CAO's 2013 Audit or provide a framework for managing E&S impact that could be effectively monitored or audited.

Case Closure

In July 2018, the client provided notice of prepayment to IFC. In October 2018, IFC confirmed to CAO that the loan had been prepaid the previous month. Since that date, IFC has had no exposure to the project or direct commercial relationship with CGPL.

Despite certain voluntary commitments received by IFC from its client prior to the repayment that offered a basis for continued monitoring of the project by IFC and CAO as well as a post-completion visit by CAO under the 2013 Action Plan, the lack of a commercial relationship with its former client, as well as the length of time that has elapsed since IFC's last efforts in 2018, makes it unlikely that IFC will resume any efforts to complete its 2013 Action Plan¹⁷⁰ or address the findings of the CAO Audit. CAO has therefore decided to close this monitoring process.

CAO emphasizes that this has not been a satisfactory process for the complainants, their families, and their communities. It has been more than a decade since complainants first raised their concerns about the environmental and social impacts of this IFC investment in 2011. To this day, they insist that their concerns regarding the power plant's effects on their health and livelihoods have not been effectively addressed and that they are struggling to manage these adverse impacts. Despite the various studies IFC and its client undertook under the Action Plan following CAO's non-compliance findings, the complainants state they have not experienced any improvements on the ground. Consistent with this perspective, CAO's monitoring efforts, including the 2025 mission, have not confirmed the desired outcomes of the Action Plan.

Looking forward, CAO suggests that addressing the documented environmental and social challenges in the Mundra region would benefit from a collaborative approach. A regional program involving government agencies, multilateral development banks including the World Bank and ADB, local industries, and affected communities could help address the cumulative impacts of industrialization and growth in the region through ecosystem restoration, infrastructure development for safe water supply, and sustainable livelihood opportunities for affected communities.

¹⁷⁰ CAO has not received confirmation of the completion of three studies and assessments committed to under the 2013 Action Plan: the laboratory analysis of dried fish samples, the independent or government validation of the NIO Model Confirmation Study, and the assessment of cumulative impacts and third-party risks. Additionally, the third phase of the turtle monitoring program was not shared with CAO.

Appendix 1: CAO's March 2025 Field Visit: Summary of Feedback

In March 2025, CAO undertook a field visit to the project site where it met with representatives from 10 local communities, including fishing and farming communities.

The main feedback obtained from these meetings indicated the following:

1. The area's rapid industrialization—including two coal-fired power plants, one of which is Mundra UMPP, numerous manufacturing industries, and the Mundra port—has led to a general decline in environmental quality and productivity. The most obvious of these cumulative impacts are: (i) reduced air quality affecting public health and crop productivity; (ii) degradation of coastal ecosystems, likely affecting fisheries; and (iii) salinity intrusion of groundwater, reducing access to safe drinking water and irrigation supply.
2. The fishing communities, and data provided by a fish company, indicate reduced yields and quality in terms of fish value, particularly in nearshore areas, thus requiring the fishers to take their boats out further, up to about 10km from the shore. The reduced fish yield is most likely the result of a combination of degradation or loss of productive ecosystems, pollution from industries, and overfishing. Ocean warming in the Gulf of Kutch caused by climate change will further exacerbate this situation, which threatens the livelihoods of these communities.
3. There is severe coastal erosion near the discharge point of the cooling water outfall for the Mundra UMPP. Villagers report loss of productive ecosystems near the end of the cooling water outfall, loss of fish fry and other aquatic organisms at the intake screen for the cooling water, and deposition of fugitive coal dust and fly ash around the plant environs. In addition, the fishing community near the outfall complained of skin irritation and rashes when exposed to the outfall water.

In considering the environmental and economic hardships of the communities in this area, including those affected by the substantial cumulative impacts of the region's industrial development, CAO believes it would be appropriate to develop a regional assistance program using a participatory approach, perhaps through a partnership of government, MDBs such as the World Bank and ADB, local industries, and the affected communities. This program should support ecosystem restoration, critical infrastructure such as safe water supply, and alternative livelihoods. This region is also increasingly vulnerable to climate change impacts, particularly increased frequency and intensity of cyclones and related coastal flooding and erosion, the effects of ocean heating on fisheries, droughts, and heat waves. Any development initiative to improve the socio-economic and environmental conditions of local fishing and farming communities could also help build resilience to the increasing risks of climate change.

In addition, CAO suggests that, at the project level, consideration should be given to shifting from the current once-through cooling water system to a recirculating system, combined with a coastal protection program to halt the ongoing coastal erosion and restore ecosystems critical for nearshore fishing.