

**SUMMARY REPORT OF INDEPENDENT REVIEW SERVICES ON
FORESTRY MONITORING DATA
AND
FORESTRY MONITORING APP DASHBOARD WEB PORTAL
FOR THE PERIOD 1 JANUARY 2022 - 31 DECEMBER 2022**

This report summary is final and has been prepared by EY for PT Indah Kiat Pulp Paper Tbk (Asia Pulp & Paper 'APP') and will be published electronically on APP's Forest Monitoring Dashboard (<https://sustainability-dashboard.com/forest-monitoring>) for informational purposes only. We have not consented to distribution or disclosure of the Report beyond this.

We have acted in accordance with the instructions of the Client in conducting its work and preparing the Report, and in doing so, has prepared the Report based on the agreed criteria with the Client, for the benefit of the Client, and has considered only the interests of the Client. We have not been engaged to act, and has not acted, as advisor to any other party.

Any attempt for reliance by any other party should be requested formally to Client and us. We disclaim all liability in relation to misinterpretation of the content of the report. No duty of care is owed by us to any Recipient in respect of any use that the Recipient may make of the Report.

Our Independent Review Services cover processes for the period from 01 January 2022 through 31 December 2022. Except as noted below, we have performed the review following the criteria which was agreed by us and Asia Pulp & Paper. We make no representation regarding the sufficiency of the review either for the purpose for which this report has been requested or for any other purpose.

Our review was performed during the period 29 March 2023 through 16 June 2023, at the Asia Pulp & Paper corporate office in Central Jakarta. Additional verifications were performed at our office in South Jakarta during the same period, 29 March 2023, through 16 June 2023. The findings were presented to APP's management.

Review Summary

1. Introduction

We were engaged by Asia Pulp & Paper to independently verify that the forest monitoring data on APP's Forest Monitoring Dashboard faithfully represents the MDA RADARSAT2 monitoring data (alert vectors) received which covered the protected areas within APP's pulpwood suppliers' concessions. The purpose of the review is to allow APP to independently demonstrate, to its stakeholders, that the information on its Forest Monitoring Dashboard is an accurate representation of the data received from MDA. The review objectives were:

- 1) verifying '**data authenticity**': the monitoring data ('alert vectors', 'data alert', or 'alerts'), presented on APP's Forest Monitoring Dashboard matches the 'certified' dataset from MDA;
- 2) verifying '**data provenance**': the monitoring data displayed on APP's Forest Monitoring Dashboard faithfully represents the dataset provided by MDA;
- 3) verifying that the monitoring data presented on the Forest Monitoring Dashboard is 'up to date';
- 4) verifying that all certified dataset provided by MDA has been assessed by APP and relevant 'alerts' are presented on its Forest Monitoring Dashboard;
- 5) verifying that the statistics and analysis presented on the Forest Monitoring Dashboard are based on the certified dataset provided by MDA;
- 6) reviewing APP's processes for receiving, analyzing, prioritizing, and disseminating 'alerts' received from MDA; and
- 7) recommending improvements to APP's processes, where relevant.

We performed the review based on criteria agreed with Asia Pulp & Paper and the scope of review considered the following coverage:

- a. the monitoring data for the protected areas within APP's pulpwood suppliers' concessions as agreed within MDA monitoring agreement¹ as of October 2020. Alert vectors received for areas outside these concessions were excluded.
- b. the alert vectors sent by MDA for the period of 01 January 2022 through 31 December 2022 including the processing of alert vectors and the data presented on APP's Forest Monitoring Dashboard.
- c. the data verification process flow from data authentication, data capture, data processing (pre-verification), data processing (post-verification), and data visualization.
- d. the means and methods used by APP to process and present the alert vectors on its Forest Monitoring Dashboard, which started from the delivery of certified dataset of all alert vectors from MDA in 2022 to reviews performed using checksum file and scripts to verify the data authenticity, incomplete data received from MDA, and anomaly detection in various image timestamps.
- e. APP internal procedures for managing, evaluating, segregating, verifying, processing, and displaying alert vectors on its Forest Monitoring Dashboard.

¹ During the period of 01 January 2022 through 31 December 2022, the Government of Indonesia enforced the implementation of P.10/MENLHK/SETJEN/KUM.1/3/2019 and P.14/MENLHK/SETJEN/KUM.1/2/2017. Due to ongoing exercise performed by APP, there might be some changes to the conservation area to be monitored by MDA in the future.

2. Findings

2.1 Password Policy and Server Access

During the review, we observed that password and account lockout configuration have not been defined for DMZ SQL Server which could increase the risk of direct data changes made without authorization.

We also observed that APP has not defined standard and/or guidance for user access provisioning to ensure the appropriateness of user access to folder storing Python script, privileged IT functions of the DMZ SQL Server hosting OS, and table (CONCESSION) from DMZ SQL Server hosting OS. Moreover, access to Internal SQL Servers hosting OS and significant tables (ALL_REG_SOS DISSOLVE_KONFLIK, PP_TAMBANG, and ALL_REG_RESTORASI) from Internal SQL Server is not segregated from other application systems. This may increase the risk of unauthorized user access/user appropriateness which could impair the integrity of alert data.

However, we did not observe any evidence of direct data changes during the review since we have performed procedures to compare the MDA alert data in DMZ server, APP Internal SQL Server, and APP FMIS Dashboard and noted there were consistent time stamps and number of alerts between the data in the servers.

2.2 Records Management

During the review, we observed that supporting documentation for 2022 alert data field verification activities were stored at the individual concessions and were not stored and organized in a centralized manner by the Head Office (HO) Conservation Team. Furthermore, screenshots taken during desktop verification by APP HO staff were stored in personal folders and were not indexed or organized in a manner which supports the review process. Therefore, we noted that there could be a risk of documents required to support the deforestation issuance might not be available when needed.

3. Recommendation

3.1 Password Policy and Server Access

We recommend that APP develop a password policy and configure the password and account lockout for DMZ SQL Server according to the best industry practice.

We also recommend that APP to segregate the servers for conservation purposes only and restrict privilege access only to Conservation team. We also recommend APP to perform periodic monitoring activities over access to privileged IT functions to ensure that the access is only granted to the appropriate personnel.

3.2 Records Management

We recommend APP to establish a system to store all field verification reports, photos, and other supporting data as well as desktop verification evidence done by HO staff to ensure records are indexed, filed, retained, and readily retrievable to support the review process. However, we noted that APP is currently developing a policy and procedures to ensure that alert vector verification is documented appropriately and is auditable.

4. Conclusion

This is a public summary of the detailed report provided to Asia Pulp & Paper based on the results of our work as described in the Report of Independent Review Services on Forestry Monitoring Data and Forestry Monitoring Dashboard Web Portal for the period 01 January 2022 - 31 December 2022. Except for the findings mentioned above, we did not identify other significant matters regarding APP's presentation of Forest Monitoring Dashboard which is based on the processing of the relevant MDA alert data.

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