（For JSPS Fellow）

Form B-5

Date（日付）
09 / 03 / 2015

Activity Report -Science Dialogue Program-
（サイエンス・ダイアログ事業　実施報告書）

- Fellow's name（講師氏名）: ARIF WIDIATMOJO　（ID No. P14379 ）

- Participating school（学校名）: Saga Prefectural Chienkan Senior High School

- Date （実施日時）: 07 / 03 / 2015

- Lecture title（講演題目）: Storing CO_2 Emission Deep in the Earth (CO_2 Capture and Storage, CCS)

（in Japanese）

- Lecture summary（講演概要）: Please summary your lecture 200-500 words.

I basically divided the lecture into three part. I put many pictures instead of words to enable the student easily grasp the main idea. The first part was introduction. I talked about my past and Indonesia, tourist attractions, foods, cultures, what most Indonesian know about Japan.

In the second part, I talked about what is greenhouse gases, its hazards, fossil fuels, briefly review about world's energy demand, future world's energy supply and demand, CO_2 emissions and main ways how to reduce the CO_2 emissions.

The last part I discuss about the CO2 Capture and Storage as one of the way in reducing the CO_2 emissions into atmosphere. I explain briefly about how CCS is performed, how to capture CO_2 and present development of CO_2 capture technology. I also discussed on how to transport CO_2, the mechanism of CO_2 injection, the injection schemes (CO_2 EOR, CO_2 ECBM, injection into saline aquifers etc), the selection of suitable site for storage and types of CO_2 trapping, verifying the storage capacity, the possible hazards that may occurs after injection, the monitoring after injection and the cost of CCS and how it affects the electricity price. I explained that CCS is among the most promising potential climate change solutions especially for the countries reliant on fossil fuels as there are evidences that CCS is both safe and permanent. Lastly, I closed the lecture with some quiz about how to be actively involved in reducing the CO_2 emissions.

- Language used（使用言語）: English with Japanese explanation from accompanying person

Must be typed

- Lecture format（講演形式）:

◆Lecture time（講演時間）70 min（分）, Q&A time（質疑応答時間）20 min（分）

◆Lecture style（ex.: used projector, conducted experiments）

（講演方法（例:プロジェクター使用による講演、実験・実習の有無など））

Presentation using projector

◆Interpretation（ex.: assistance by accompanied person, provided Japanese explanation by yourself）（通訳（例:同行者によるサポート、講師本人による日本語説明））

Assistance by accompanied person

◆Name and title of accompanied person（同行者 職・氏名）

KUMASAKA JUNPEI

◆Other noteworthy information（その他特筆すべき事項）:

I was happy because I got many questions related to CCS, even before I started my third part of my lecture. After the lecture, still there were some questions. For example, how to calculate the CO_2 emissions in million tonnes, how many CCS projects are currently undergoing, how many CO_2 can be stored, the real cost of electricity if the power plants is equipped with CCS facility etc.

- Impressions and opinions from accompanied person（同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。）: この度は我々の研究内容等について講義する機会を頂き誠にうれしく思います。英語での講義ということで最初は心配していましたが、発表に対して学生たちからたくさんの質問を頂き我々にとっても大変有意義な時間となりました。この機会が学生たちにとって有益なものになれば幸いです。