

Johkasou Verification Project in Hung Yen

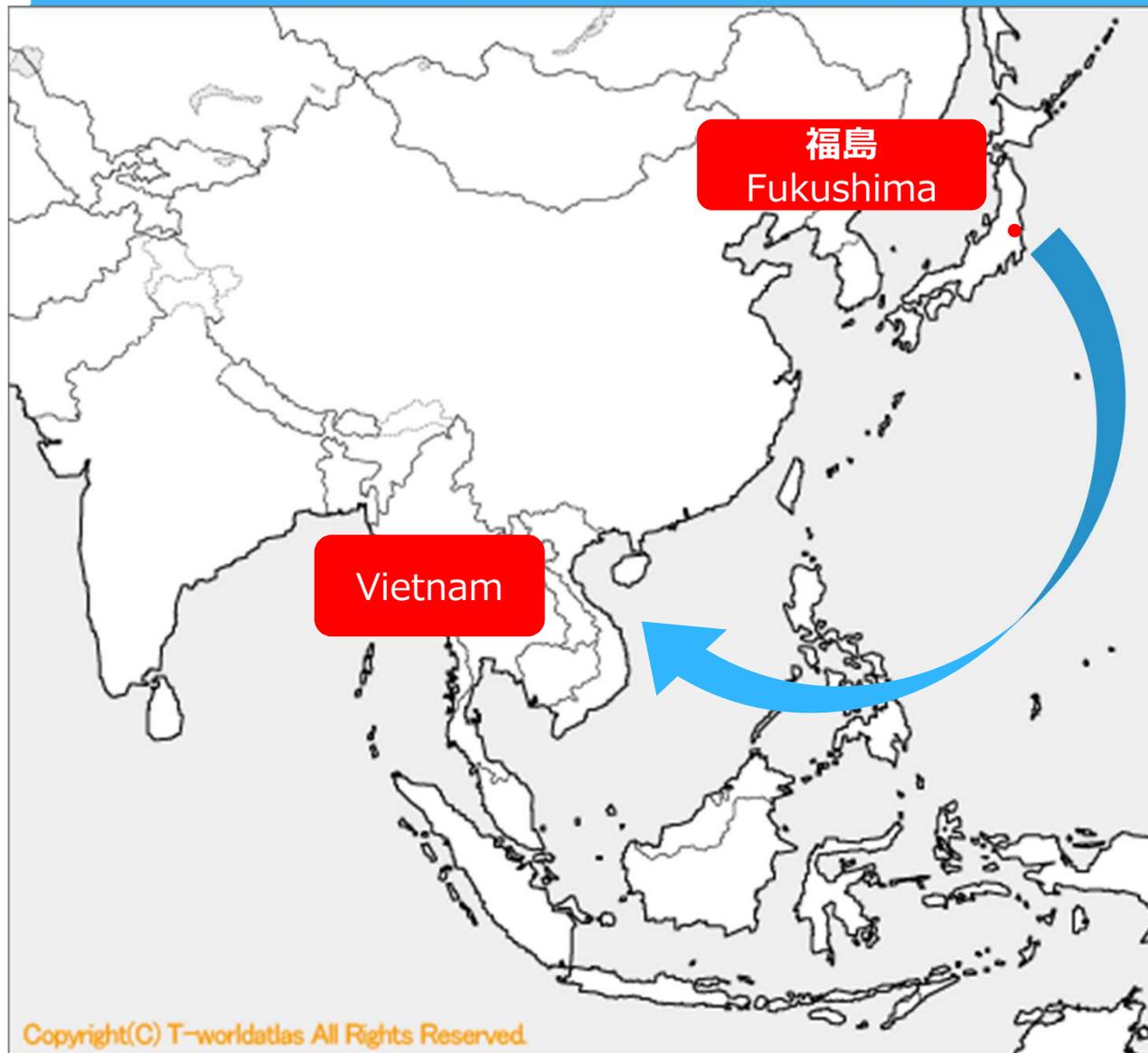
Verification Survey with the Private Sector
for Disseminating Japanese Technologies
for Improvement of Domestic Wastewater Treatment through Introducing Johkasou in
Hung Yen

September 24, 2019

Kankyo Bunseki Kenkyusho Co.,Ltd.,
Showa Eisei Center Co.,Ltd.,
Honda Facilities Corporation



1. We will contribute to resolve issues in Vietnam and explore business opportunities in Vietnam



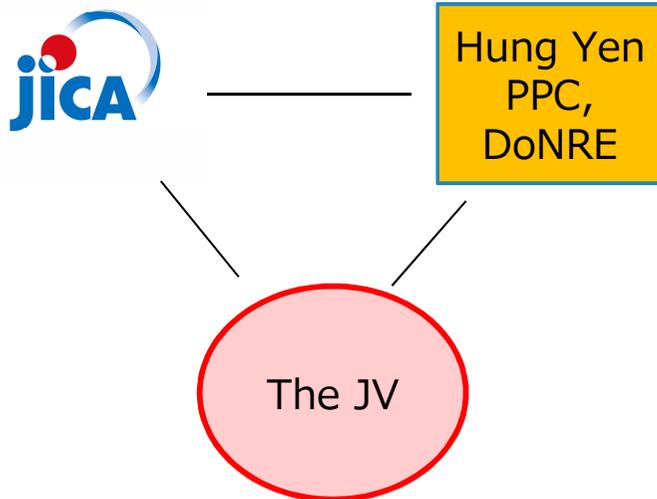
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Johkasou business

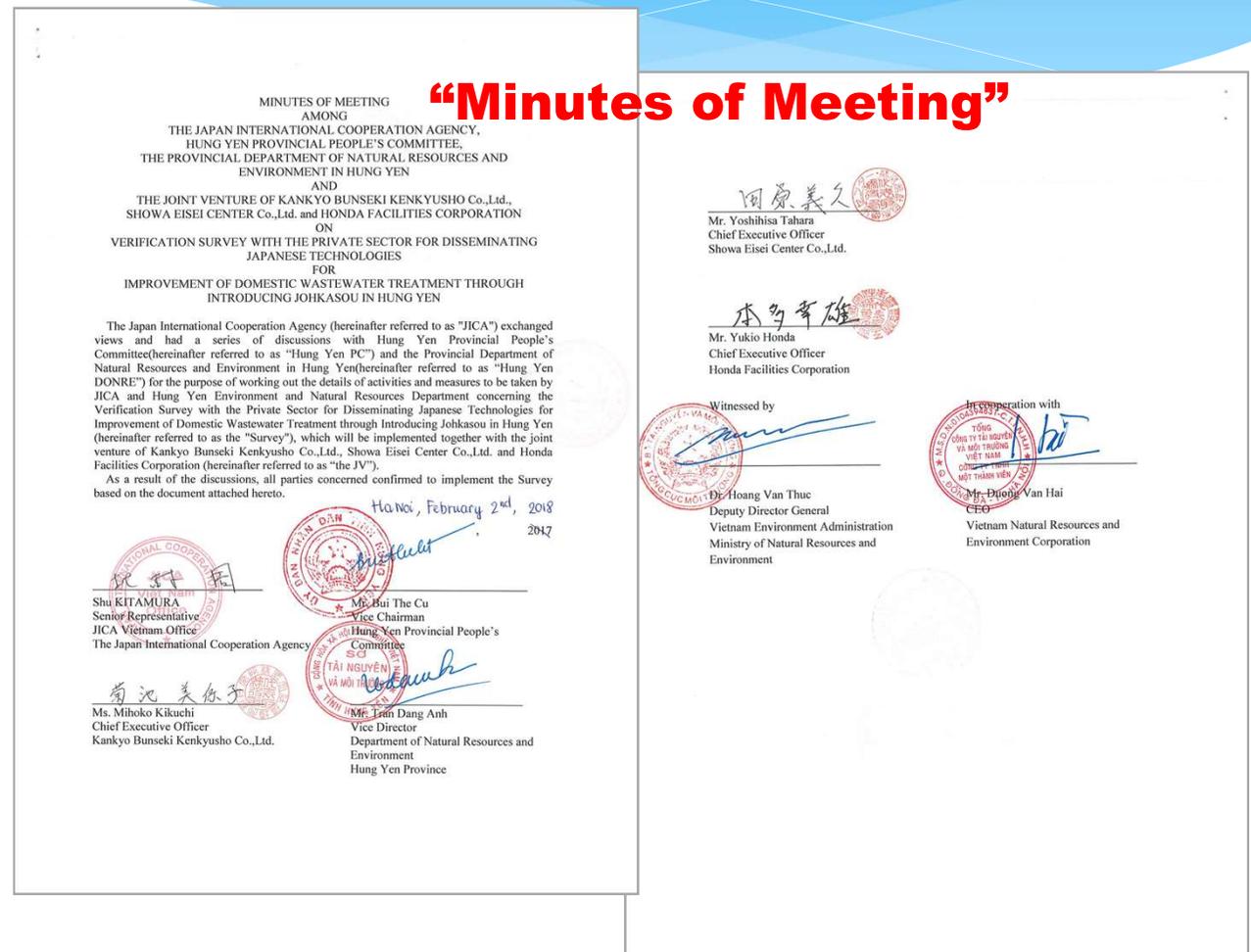
Honda Facilities Design and construction	
Showa Eisei Center Maintenance service	
Kankyo Bunseki Kenkyusho Water analysis	

2. Structure of the project

- A JICA's ODA project in Vietnam proposed and implemented by the JV
- JICA, JV, Hung Yen People's Committee and Hung Yen DoNRE signed an agreement for the Project



- Kankyo Bunseki Kenkyusho Co.,Ltd.
- Showa Eisei Center Co.,Ltd.
- Honda Facilities Corporation



3. Purpose

- Install Johkasou in Hung Yen and conduct periodic operation and maintenance to verify performance and conformity to Vietnam
 - ✓ Deepen understanding of Johkasou and raise public awareness for the importance of O&M
 - ✓ Technology transfer
 - ✓ Develop Johkasou's design, specifications, O&M service and price suitable for Vietnam
- Encourage Vietnamese government to develop legal system for de-centralized domestic wastewater treatment
- Develop future business plan in Vietnam

Contribute to improve domestic wastewater treatment standard in Vietnam

Develop business plan and the market strategy for Johkasou service in Vietnam by the JV

4. Activities

1. Pilot installation and verification
 - * Install Johkasous of 3 different sizes in Hung Yen
 - * Gather information on local procurement
2. Periodically operate and maintain Johkasous to verify performance
 - * Newly installed Johkasous in Hung Yen and existing Johkasous in Hanoi
 - * Evaluate performance by testing water quality
3. Technology transfer
 - * Training on installation, operation and maintenance(O&M)
4. Education and awareness
 - * Educational activities for local community to raise awareness on water environment and importance of domestic wastewater treatment
5. Support for the development of legal system on domestic wastewater treatment
 - * Knowledge co-creation program in Japan
 - * Workshop in Vietnam
6. Develop future business plan in Vietnam
 - * Develop Johkasou's design, specifications, O&M service and price suitable for Vietnam

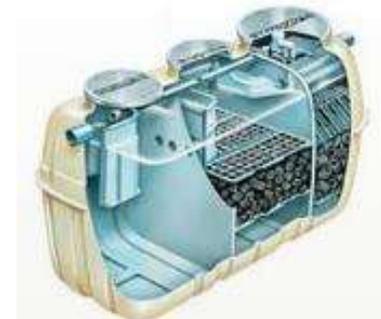
5. Sites of the Project



Dinh Du Kindergarten



Middle-sized Johkasou (for 30)



Small-sized Johkasou (for 7)



Ecopark



Large-sized Johkasou (for 1000, 200m³/day)

6. Installation(1) / middle-sized Johkasou

Installation of middle-sized Johkasou in Dinh Du Kindergarten
(1st week of February to 1st week of June, 2019)



Excavation



Concrete work



Piping work



Manholes necessary for O&M



Drainage pit for the final effluent

7. Installation(2) / Large-sized Johkasou

Manufacture and installation of large-sized Johkasou in ecopark
(2nd week of July - to be completed 5th week of September, 2019)



Large-sized Johkasou



Final inspection in the factory



Carrying out from the factory



Excavation



Installation work



Installation completed

8. O&M of existing Johkasous

With the cooperation with LIDECO and residents of 5 homes, the JV conducted the first O&M of existing Johkasous on 29 August 2019.



Before cleaning & maintenance



Cleaning by a vacuum car



Cracking was found inside



Manholes



Before cleaning & maintenance



After Cleaning and re-watering

9. Educational & awareness raising activities

- Lecture at ecopark (29 Sep 2018)



- Lecture at Kinh Du Kindergarten (29 Sep 2018)



10. Knowledge co-creation program in Japan

JV invited keypersons from MoNRE, Hung Yen PPC, Hung Yen DoNRE and Hung Yen DoST to Japan during 15-19 April, 2019.



O&M work for middle-sized Johkasou



Lecture by Ministry of the Environment



No.2 Nasu Wastewater Treatment Center



Discussion on legal system on domestic wastewater treatment

11. Recommendation to Vietnam

- Higher public awareness regarding domestic wastewater treatment to save water environment
- Development of Johkasou and its O&M appropriate for Vietnam and promote Johkasou industry
- Development of legal system for de-centralized domestic wastewater treatment
 - * Set standards for de-centralized domestic wastewater treatment facilities
 - * Human resources development
- Government's support
 - * Mandatory installation and public support for installing/maintenance treatment facilities
 - * Regional governments i.e. Provincial PPCs and DoNREs develop domestic wastewater treatment plan (Public sewerage areas / de-centralized treatment areas)

Thank you for you attention!