

# Indonesia Water Challenge

2019



ECO

SMART

PORT



Kingdom of the Netherlands



# Program Report

# INDONESIA WATER CHALLENGE 2019

## Preview



More than **150 students** from **7 universities** participated in the Campus Tour program

**25 top students** supported by team of Dutch and Indonesian experts



Took place in Terminal Teluk Lamong, **the first green port** in Indonesia

**Creative and practical solution** for sustainable port



More photos at:

<https://www.facebook.com/indonesiawaterchallenge/>

<http://www.instagram.com/indonesiawaterchallenge/>

# INDONESIA WATER CHALLENGE 2019

## Introduction

As the urgency and complexity of water and other climate-related problems is increasing dramatically, the world needs inspiring and capable professionals with a passion for water and maritime. It is particularly important to engage young people, who are still in a position to make meaningful choices with regards to their education and career.

From this basis, we invite talented Indonesian students and young professionals to investigate fundamental water problems and cooperate with both Indonesian and Dutch experts to develop their own ideas and solutions through this program, Indonesia Water Challenge.

The latest edition of the program was conducted in Semarang from September 2016 to March 2017 under the theme *Blue Green Cities*. Students were challenged to develop practical solutions for 3 locations in Semarang that have been long plagued by water problems (Kota Lama, Tanjung Emas Port, and Semarang Riverfront).

This year's program, under the theme of Eco-Smart Ports was launched on 20 February 2019, together with Bilateral Maritime Forum in Jakarta between Indonesia and the Netherlands.



During the Campus Program, presentations were held on the campuses of selected universities. In addition, a large promotional social media campaign was conducted via Facebook and Instagram.

After a rigorous selection process from over 170 applicants, 25 students were selected to participate in the Water Academy, an intensive three days program in which the participants worked on assignments, under the guidance of Indonesian and Dutch experts. The details of the activities are further described in the next page.

## Programs

### Launch Event

20 February 2019 - Bilateral Maritime Forum

### Campus Campaign (Online & Offline)

21 February 2019 – University of Indonesia, Jakarta

26 February 2019 – Bandung Institute of Technology, Bandung

28 February 2019 – Gadjah Mada University, Yogyakarta

1 March 2019 – Sepuluh Nopember Institute of Technology, Surabaya

### Registration & Selection

8 February – 11 March 2019

### Water Academy

19 – 21 March 2019

## Theme

The Eco-Smart Port theme was chosen in consultation with the supporting companies and experts. With over 17,500 islands make up the nation, Indonesia has a rich history of activities across seas. Under the current administration, a more coordinated network of ports designed to handle international traffic better and streamline more local trade system, and beginning to adopt a more advanced and sustainable port concept, the concept of **eco-smart port**.

It also correlates with our choice of location for the Water Academy program. We picked Terminal Teluk Lamong in Surabaya, the first green port in Indonesia as a case study for students and experts.



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## Partners

The following organisations have provided expertise for the program during the program.



This year, we have more involvements from Indonesian parties from both public and private sector. **Ministry of Coordinating Maritime Affairs** is our new strategic partner, and we have an Indonesian company that provided financial support to the program, **Waskita Karya**, one of the major construction companies in Indonesia.

## Activities

### Campus Campaign (Online & Offline)

During the Campus Tour, presentations were given on the campuses of five selected universities:

- Bandung Institute of Technology, Bandung
- Diponegoro University, Semarang
- University of Indonesia, Jakarta
- Sepuluh Nopember Institute of Technology, Surabaya
- Gadjah Mada University, Yogyakarta

A half-day program has been organized at each university consisting of presentations/discussions with the relevant faculties and selected students.

In total more than 200 students participated. The Eco-Smart Port theme was presented in the presentations, with a great deal of attention for examples from Dutch practice, mainly Port of Rotterdam. Also, a large promotional social media campaign was conducted via Facebook and Instagram.

This year, we have three new universities joining, University of Indonesia, one of the best universities in Indonesia, is joining as one of our academic partners. From our



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online campaign, we have two new universities, Brawijaya University, a state university with its notable water education program, and Pancasila University.

## Registration & Selection

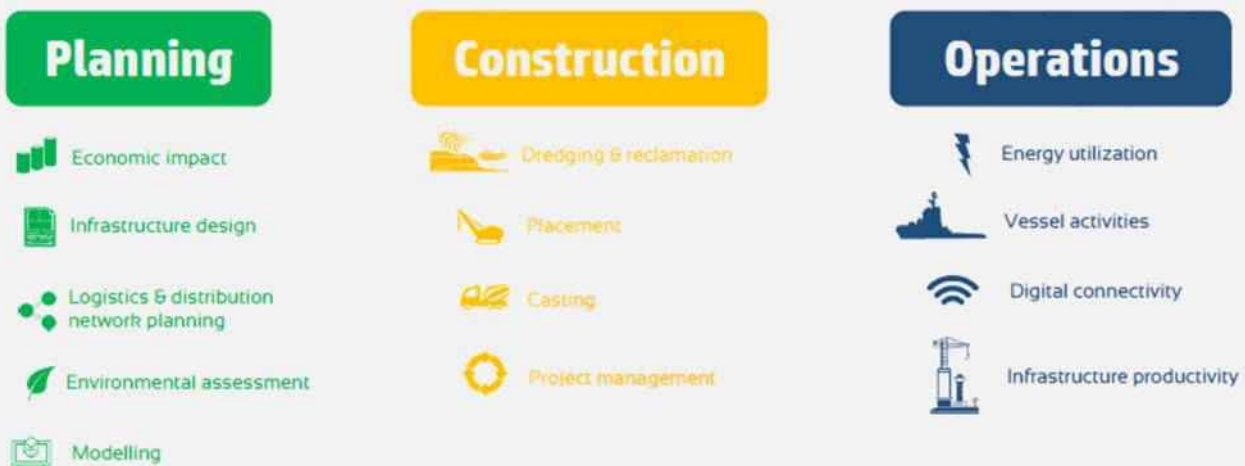
We encouraged students from diverse backgrounds to apply. We want to encourage students to create an integrated solution and to show them that their expertise is needed in the broad element of water sector.

For the selection process, students were asked to send a motivation letter and their CV, as well as a one-minute video clip in which they explained their motivations and why we have to select them for the Water Academy program. A total of 177 students applied, from which ultimately only 25 were selected as final participants.

## Water Academy

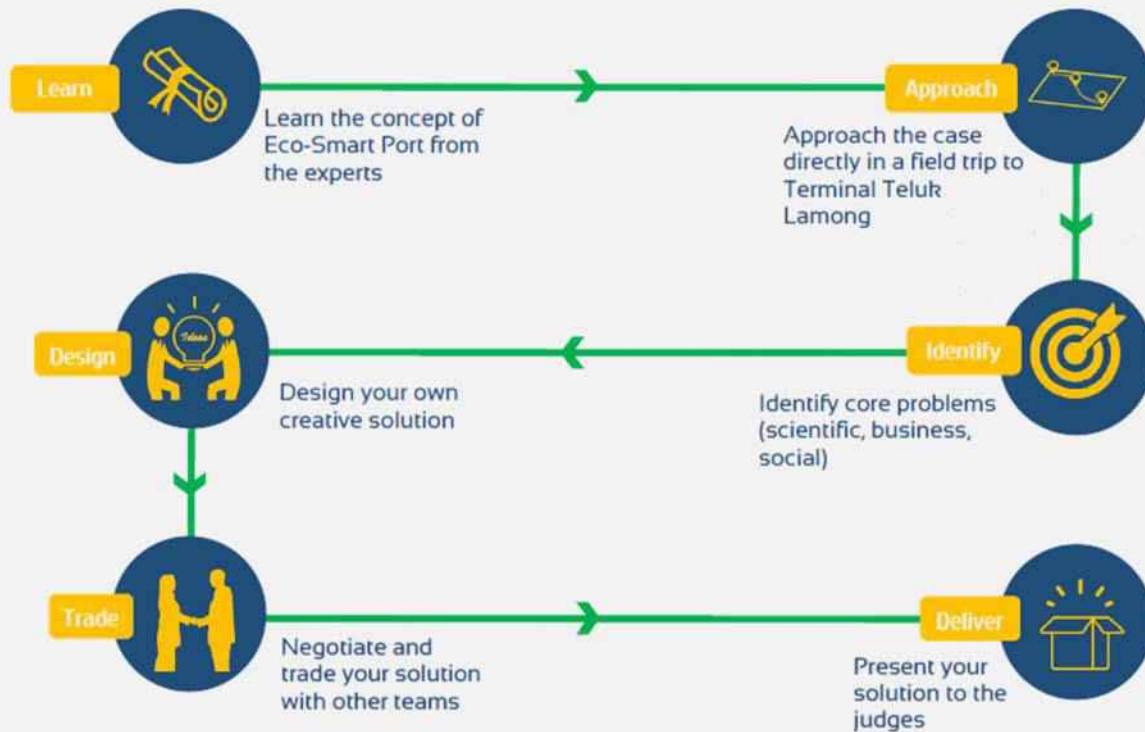
The Water Academy program was conducted on 19-21 March 2019, at Terminal Teluk Lamong in Surabaya, with the aim to provide the participating students a real-world case study of eco-smart ports.

The students were divided into 5 groups for an assignment and an expert as a mentor for each teams. The assignment was to create a solution that can solve the current problem of the terminal, and maximize its business potential, so they have to think of a solution that is scientifically and commercially viable. They use the framework in each phase of port development – Planning, Construction, and Operations – to build the solution. This framework also utilizes the expertise of our partners properly.



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Students went through 5 steps of action plan in creating their solution:



## *First day, 19 March 2019*

Mrs. Dothy, CEO of Terminal Teluk Lamong, and Mr. Rudy Herdiyantoro, Vice President of Pelindo III, contributed to the opening speech. They underlined the importance of young people's involvement in the maritime sector and sustainability in port development.



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## ➤ 1<sup>st</sup> Action Plan – Learn

Before the students assigned to the task and make a field trip in the terminal, it is crucial for them to grasp the concept of Eco-Smart Port from the experts. In this action plan, students were introduced the concept of Eco-Smart Port in maritime perspective with Indonesian and Dutch experts from diverse backgrounds.

- Rofi Alhanif – Ministry of Coordinating Maritime Affairs
- Willem Dedden - Port of Rotterdam
- Herbert Sibarani - Van Oord
- Maaïke Maarse - Deltares
- Kharis Alfi - Waskita Karya
- Reka Yusmara - Terminal Teluk Lamong



## ➤ 2<sup>nd</sup> Action Plan – Approach

After the students already grasp the concept of Eco-Smart Port, they will do field trips around the area of the terminal with experts to compare the difference between the theoretical concept and its practical execution. The visited area were ring 1, where it is affected by the construction of Terminal Teluk Lamong, it is also an area where fishermen lived, and inside the terminal itself to see how it operates in real time.





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## ➤ 3<sup>rd</sup> Action Plan – Identify

Now that each team and experts have done the field trip. They started to map out the situation Terminal Teluk Lamong, identify scientific, economic, and social problems, and summarize their findings. This process went through until the end of the first day.



## *Second day, 20 March 2019*

In the second day, they continue to build up their work from the first day and started to *design* their solution. Later on, each team *trade* roles as a port stakeholder to learn how to negotiate and find common ground between each other.

## ➤ 4<sup>th</sup> Action Plan – Design

Under the guidance of the experts, they design their own vision of Eco-Smart Port based on activities of the previous day, and fine-tune their design towards the existing condition of the terminal.



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## ➤ 5<sup>th</sup> Action Plan – Trade

Each team play roles as a government, port operator, local residents, NGO) using Deltares' Port of the Future Serious Games to identify the real-world scenario (negative and positive impact) of port development, they were judged using three parameters: people, planet, profit. In the end, each of these parameters has to be balanced for them to have good port development.



After role-playing as each stakeholder of ports, they continue to finalize their design before the final day. At the end of the second day, they had an exercise in presenting their work to the internal experts of Terminal Teluk Lamong to see how practical and usable their solution would be to the terminal.



## *Final day, 21 March 2019*

### ➤ 5<sup>th</sup> Action Plan – Deliver

In the last day, each team will deliver their final design complete with their cases (commercial, engineering, socio-economic) to the judge panels, while each team have a good solution, one team stood out with their idea of building a logistic railways that could connect the terminal and its surrounding, they were presented the award as a winner of Indonesia Port Challenge 2019.

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Mr. Reka Yusmara representing Terminal Teluk Lamong closed Indonesia Port Challenge 2019, he was happy collaborating with other private and public stakeholders in nurturing students towards real-world educational experience, he hoped there would be a collaboration event like Indonesia Port Challenge between Indonesia and the Netherlands in the future.





## Results

1. More than 2,000 students throughout Indonesia have been informed about the program via social media since the program began in 2014.
2. Over 170 students have registered for the Water Academy
3. 25 students participated in the Water Academy and have been able to learn about sustainable port development ideas under the guidance of both Indonesian and Dutch experts. In addition to the substantive learning process, the students have been able to train many essential skills: presenting, negotiating, collaborating with other fields of study, teamwork, proposals, and writing business cases.
4. Students indicated they enjoyed the setup of the Challenge. Instead of a regular classroom study, they work on their solution from the experts directly, go outside to see the real-world situation and collaborate with students from other fields of study to create an integrated solution. The atmosphere was dynamic, it ensured that all students could actively participate in the collaboration process.
5. Almost all Water Academy students have never visited an actual port, so this was a valuable opportunity for them to learn directly from the first port in Indonesia that has applied the concept of Eco-Smart Port.
6. Companies and governments have approached almost half of the participants for internships or jobs.
7. Based on the anonymous written survey, Indonesia Water Challenge 2019 was rated as "Excellent" (96%) or "Good" (4%).



## What the students said



*"I enjoy the interaction with experts and other students, the cross-discipline study is not something that I do often"*

**Achmad Fayed, ITB**



*"I enjoy the company, I wish we can do the Challenge longer"*

**Ahmad Dhuha, UNDIP**



*"As a local, I'm happy that we have a green port in Surabaya and learn about it together"*

**Ahmad Nailul, ITS**



*"I'm a quite student and normally don't talk much, so it was a challenge for me to speak up and lead. I hope we can see each other again"*

**Alda Tazkia, ITB**



*"It is thrilling to present our ideas to these international and local experts, this event trains me to be better"*

**Aloysius Adhitya, ITB**



*"Feels good to know what geology engineering can be useful for sustainable port development"*

**Andryansah Bagas, ITB**



*"I like the program in putting emphasis on the importance of environmental aspect in port planning and development"*

**Annisa Nisita, UGM**



*"I enjoy the program very much, appreciate the work from experts to teach us"*

**Arief Balie, UGM**



*"I like the program"*

**Aufar Lubis, ITB**



*"I like the concept of having an active presentation, it makes the atmosphere more interactive"*

**Azhar Rhozaq, ITB**



*"Substantive and intense, I hope there will be more cooperation between international and local for Indonesian students"*

**Bunga Ramadhani, ITB**



*"Leading a team is not as easy as I thought, I learned a lot from this event"*

**Bagas Indra, UNDIP**



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*"I appreciate the work from the committee to make Indonesia maritime sector better than before"*

**Catherina Mustika, ITB**



*"I'm happy to finish what I started in Teluk Lamong with the team and experts"*

**Dwi Khorin Nisa, ITB**



*"I like the program very much, I hope I can work again with friends and experts"*

**Fauzi Septian, ITB**



*"I wish the program had gone longer, I had a really good time building the solution with my team"*

**Hanan Wijdan, UGM**



*"I like the collaboration with other university students, the experts were very helpful in giving us new insight"*

**Johana Ataupah, UNSW**



*"It is thrilling to present our ideas to these international and local experts, this event trains me to be better"*

**Machmuddin Fitra, UNDIP**



*"I see hope in developing sustainable ports, and now I am eager to learn more since I want to make sure we can continue our good work"*

**Mariah Bening, ITB**



*"Studying in ports every day is not something we always do, so this has been a very valuable experience in my personal development"*

**Mohammad Gama, UI**



*"For the first time I have learned the element of 'people' in port, I like to relate with them. I hope the program extend to 1 month next time"*

**Muhammad Hasim, UNDIP**



*"I hope we can replicate this event, direct on-the-field learning is rare especially in ports"*

**Muhammad Ichlasul, UGM**



*"I like the integrated approach with other students and experts, I hope more Brawijaya students can join this event in future"*

**Novianti Sidi, UNIBRAW**



*"I had never thought my architecture background would be useful for port, I really enjoy the integrated learning with my engineering teammates"*

**Putri Afidati, PANCASILA**



*"I like the program and learning from the experts, particularly Mr. Herbert as my mentor"*

**Sarah Abighail, ITB**

## Also, the experts..



*"The Challenge is good and intense, I wish it had gone for more than three days so the students can have more time"*

**Herbert Sibarani, VAN OORD**



*"First time for me to interact with all these Indonesian students, they are smart, talented, and energetic"*

**Maaïke Maarse, DELTARES**



*"I like the event, I hope next time we have more diverse students from commercial and social science to contribute"*

**Willem Dedden, PORT OF ROTTERDAM**



*"The solutions from the students were creative, I wish them luck!"*

**Irwan Ranuh, PORT OF ROTTERDAM**



*"We are happy with the quality of the students, it fits with our objective to increase our human resource capacity. It also trains millennial to be creative and innovative"*

**Army Maulana, WASKITA KARYA**



*"The Challenge is good as a development platform to develop knowledge and critical thinking for students, hopefully in the next event we have more students from social and economy background"*

**Rofi Alhanif, MINISTRY OF MARITIME AFFAIRS**



*"We're happy to host Indonesia Water Challenge in our terminal, we're happy with the way it was planned and new knowledge that we've learned"*

**Reka Yusmara, TERMINAL TELUK LAMONG**



*"It was a privilege for me to give an opening speech for this event, the students are energetic. I hope we continue to create maritime education event like this"*

**Rudy Herdiyantoro, PELINDO III**