**REPORT ON TRAINING PROGRAM AT DAI BAI COMMUNE**

1. **Overview**

The training program is organized in two days, one focusing on local authorities, officials, and teachers, and the other focusing on equiping the locals villagers with better practices, raise their awareness on measures to control environmental health risks from metal recycling activities in the craft village. The training programs has been implemented according to the tentative plan, with major successes, and recieved great satisfaction and praises by all stakeholders. The responses of the participants can be used as advices for future references when doing similar initiatives, and brought a clearer insights on the effects of heavy metal pollution on daily lives.

The training program is organized and co-chair by Bac Ninh DONRE and CECOD, with financial support from USAID through Pure Earth. Pure Earth also took part in assisting the job of design, supervise, and assure the quality of the training programs. CECOD is Pure Earth partners by being the organization’s technical consulting unit.

1. **Timeframe**:
* Training program for villagers in Dai Bai: **8:00 to 16:30 on January 26, 2021 ( Training Dai Bai 1)**
* Training program for local authorities, officials, and teachers in Dai Bai: **8:00 to 16:30 on January 27, 2021 (Training Dai Bai 2)**
1. **Location:**

Hall of the People's Committee of Dai Bai commune, Gia Binh district, Bac Ninh province

1. **Participants**
2. **Training program for villagers in Dai Bai (January 26, 2021)**

50 people attended the training class, including:

* Members of the Women's Union of Dai Bai commune and the Veterans Association of Dai Bai commune
* Members of the environmental protection committee of Song Thap and Trinh Nguyen neighborhoods Veterans Association.
* Households in Dai Bai commune

The list of participants is listed below:

| **Name** | **Organization** | **Phone/Email** |
| --- | --- | --- |
| Do Dang Cuong | Dai Bai Industrial Unit | 0975561094 |
| Nguyen Thi Dung | Dai Bai Industrial Unit | 0334617374 |
| Nguyen Duc Manh | Dai Bai Industrial Unit | 0902188775 |
| Nguyen Van Cuong | Dai Bai Industrial Unit | 0987156556 |
| Nguyen Thi Mui | Dai Bai Industrial Unit | 0979865171 |
| Do Dang Kien | Dai Bai Industrial Unit |  |
| Vuong Van Hanh | Dai Bai Industrial Unit | 0912142603 |
| Vuong Van Quan | Dai Bai Industrial Unit | 0983397812 |
| Nguyen Cong Son | Dai Bai Industrial Unit | 0947147239 |
| Do Dang Thanh | Dai Bai Industrial Unit | 0984104146 |
| Nguyen Van Thanh | Dai Bai Village | 0345647228 |
| Nguyen Xuan Cuong | Dai Bai Village | 0947120748 |
| Nguyen Thi Van | Dai Bai Village | 0982740538 |
| Nguyen Thi Viet | Dai Bai Village | 0383834139 |
| Nguyen Van Dong | Dai Bai Village | 0982075425 |
| Nguyen Thi Lan | Dai Bai Village | 0989113433 |
| Nguyen Van Cuong | Dai Bai Village | 0972271635 |
| Nguyen Van Trung | Dai Bai Village | 0944636798 |
| Vuong Van Ngoc | Dai Bai Village | 0393727152 |
| Vuong Van Thach | Dai Bai Village | 0973550583 |
| Hoang Van Hung | Dai Bai Village | 0917383807 |
| Nguyen Duc Dung | Dai Bai Village | 0984338224 |
| Nguyen Van Quyet | Dai Bai Village | 0364015481 |
| Nguyen Duc Nga | Dai Bai Village | 0966759519 |
| Pham Van Thinh | Dai Bai Village | 0339821589 |
| Nguyen Van Cuong | Dai Bai Village | 0985062512 |
| Nguyen Van Tu | Dai Bai Village | 0347681499 |
| Nguyen Xuan Nhat | Dai Bai Village | 0944581048 |
| Nguyen Van Nam | Dai Bai Village | 0934663222 |
| Nguyen Thi Nga | Dai Bai Village | 0916536946 |
| Nguyen Thi Hang | Dai Bai Village | 0978253372 |
| Nguyen Thi Hoa | Dai Bai Village | 0394144298 |
| Nguyen Van Chung | Dai Bai Village | 0888188780 |
| Nguyen Dang Duc | Dai Bai Village | 0973823126 |
| Pham Van Binh | Dai Bai Village | 0948774820 |
| Pham Van Can | Dai Bai Village | 0963229968 |
| Nguyen Thi Ly | Dai Bai Village | 01665858580 |
| Nguyen Thi Thoa | Dai Bai Village | 0975735103 |
| Nguyen Viet Tron | Dai Bai Village | 0976659283 |
| Nguyen Thi Lan | Dai Bai Village | 0964223310 |
| Nguyen Van Thoi | Dai Bai Village | 0986855707 |
| Vu Viet Cuong | Dai Bai Village | 0358863203 |
| Nguyen Thi Ha | Dai Bai Village | 0946658582 |
| Dinh Gia Can | Dai Bai Village | 0396600819 |
| Nguyen Van Kien | Dai Bai Village | 0355704298 |
| Nguyen Duc Khanh | Dai Bai Village | 0967046366 |
| Pham Van Tien | Dai Bai Village | 0977166080 |
| Vuong Van Huong | Dai Bai Village | 0915278623 |
| Nguyen Xuan Huong | Dai Bai Village | 0949934233 |
| Nguyen Quang Phap | Dai Bai Village | 0942394814 |

1. **Training program for local authorities, officials, and teachers in Dai Bai (January 27, 2021)**

50 people attended the training class, including:

* Officer of Dai Bai Commune People's Committee
* Secretaries, heads of villages in Dai Bai commune, directors of agricultural cooperatives, teachers of schools in Dai Bai commune.

| **Name** | **Organization** | **Phone/Email** |
| --- | --- | --- |
| Nguyen Van Vinh | People Committee of Dai Bai | 0858346069 |
| Nguyen Cong Thanh | People Council Chairman of Dai Bai | 0982938647 |
| Nguyen The Trung | Veterans Association of Dai Bai | 0355382397 |
| Tran Van Lanh | Veterans Association of Dai Bai | 0982256700 |
| Nguyen Van Dan | Deputy Chairman People Committee Chairman of Dai Bai | 0975435967 |
| Pham Van Hung | Deputy Secretary of Party Committee | 0397580865 |
| Nguyen Van Giang | Justice Department of commune | 0983200532 |
| Nguyen Van Nam | Deputy Chairman of Dai Bai Commune People Council | 0964664658 |
| Nguyen Van Huan | Doan Bai Village chief | 0985585346 |
| Nguyen Duc Khoi | Head of Dai Bai Camp | 0915572859 |
| Nguyen Van Quang | People Committee of Dai Bai | 0982935111 |
| Nguyen Van Quang | People Committee of Dai Bai | 0984838538 |
| Dang Van Tuan | Head of Ngoc Xuyen Village  | 0977358422 |
| Dinh Huu Doanh | Vice president of the commune Veteran Association | 0915656151 |
| Dang Ngoc Mau | The head of Ngoc Xuyen Village Veteran Association | 0987921291 |
| Nguyen Van Tho | The head of Hoi Doan Village Veteran Association | 0914807733 |
| Nguyen Van Thuc | Director of Rural Cooperative | 0393094978 |
| Dinh Gia Phan | People Committee of Dai Bai | 0986257635 |
| Nguyen Thi My | People Committee of Dai Bai | 0979688025 |
| Vu Van Bang | People Committee of Dai Bai | 0975692615 |
| Dinh Thi Hoa | People Committee of Dai Bai | 0968352970 |
| Nguyen Thi Men | People Committee of Dai Bai | 0968352970 |
| Pham Van Sang | People Committee of Dai Bai | 0988744595 |
| Nguyen Thi Nham | Tay Giua Chief | 0369275907 |
| Nguyen Viet Tung | Director of Son Village Cooperative | 0363193970 |
| Nguyen Cong Doan | Geology Officer | 0975996603 |
| Nguyen Thi Lan | President of Commune’s Women Union | 0982443293 |
| Nguyen Van Duong | Veterans Association of Dai Bai | 0977746817 |
| Do Xuan Dang | Director Ngoc Xuyen Village Cooperative | 0977831830 |
| Le Thi Hanh | Secondary school teachers in Dai Bai Secondary School | 0943184269 |
| Nguyen Thi Nga | Principal of Commune Preschools | 0916536946 |
| Nguyen Thi Thu | Deputy Director of Women's Union | 0349558269 |
| Nguyen Cong Ly | Deputy Secretary of Commune Ho Chi Minh Youth Union | 0985131804 |
| Dinh Gia Cam | Chairman of the Dai Bai Elderly members | 0396600819 |
| Nguyen Dang Phong | Commune Fatherland Front Committee Chairman | 0912590766 |
| Nguyen Duc Cuong | Director of Rural Cooperative Agriculture Service Camp | 0868945659 |
| Vu Viet Thu | Director of Rural Cooperative Agriculture Service New Village | 0987416204 |
| Nguyen Van Ly | BT Dai Bai of village | 0985996963 |
| Hoang Van Cau | People Committee of Dai Bai | 0982956856 |
| Nguyen Dinh Xo | People Committee of Dai Bai | 0356271255 |
| Nguyen Duc Tre | People Committee of Dai Bai | 0362050065 |
| Hoang Van Thuan | People Committee of Dai Bai | 0919032224 |
| Nguyen Van Tam | People Committee of Dai Bai | 0915102019 |
| Nguyen Thi Huyen | People Committee of Dai Bai | 0383405322 |
| Truong Thi Bich Phuong | DoNREs Bac Ninh | 0982854404 |
| Dao Duy Phon | DoNREs Bac Ninh | 0947058604 |
| Pham Thi Huyen | DoNREs Bac Ninh | 0966519916 |
| Duong Thi To | Bac Ninh Department of Environmental Protection | 0982557036 |
| Le Duc Tho | Bac Ninh Department of Environmental Protection | 0972295686 |
| Nguyen Ngoc Lien | Bac Ninh Department of Environmental Protection | 0982753568 |
| Dam Ngan | Center NRE KTCNTT Bac Ninh | 0972697987 |

1. **Lecturers information**
* Mr. Ha Minh Hoa - Environmental Specialist - Bac Ninh Environmental Association.
* Mr. Dao Nhat Dinh - Environmental Specialist - Center for Environment and Community Development.
* Mrs. Ta Thuy Lan - Environmental Specialist - Master of Environmental Science
* Mrs. Duong Thi To – Environmental Specialist – Director of CECOD
1. **Training Program**

Each training programs, on both days, took around eight hours to complete, starting with the opening remarks at 8:30 AM and end with the closing remarks at around 16:30 AM. The format of the training programs greatly ressemble each other, with only minor differences in the attendees. Although they inherit the same format, the details instructions about technical knowledge and group discussion is tailored to each target audience, as the daily jobs of local authorities and villagers are not the same.

The following is the format and timetable of the training program:

|  |  |  |  |
| --- | --- | --- | --- |
| **Time** | **Programs** | **Main Contents** | **Lecturer** |
| 8h30’ – 8h40’ | Opening remarks  |  | Mrs Duong Thi To and Officials of the village or Province |
| 8h40’ – 10h00’ | An introduction to the current environmental status of Bac Ninh province and the environment of the craft villages. | - An overview of the environment in Bac Ninh province- Overview of production activities and environmental pollution of the craft village. | Mr. Dao Nhat Dinh |
| 10h00’ – 10h15’ | Tea break |  |  |
| 10h15’ – 11h15’ | The Effects of Heavy Metals on Human Health | -Impacts of heavy metal exposure on human health- Symptoms when exposed to heavy metals | Mr. Ha Minh Hoa |
| 11h15’-11h30’ | Discussion  | Question 1: Please raise pressing environmental issues in the area where your family is livingQuestion 2: In your opinion, how would the mentioned above environmental problems affect your health and your family's health? | Mrs. Pham Thi Huyen and Mrs. Duong Thi To |
| 11h30’ – 13h30’ | Lunch break |  |  |
| 13h30’ – 14h30’ | Proposing solutions to treat environmental pollution in craft villages | - Proposing solutions to treat environmental pollution of soil, water, air, solid waste in craft villages | Mrs. Ta Thuy Lan |
| 14h30’ – 15h30’ | Control heavy metal pollution with health implications | - Recommend the measures to prevent and control metal contamination problems for human health | Mr. Ha Minh Hoa |
| 15h30’-15h45’ | Tea break |  |  |
| 15h45’-16h25’ | Discussion | Question 1: Please state the pollution treatment solutions that are being applied in the craft village.Question 2: Please describe the current measures your family is taking to protect your health from metal pollution. | Mrs. Pham Thi Huyen and Mrs. Duong Thi To |
| 16h25’-16h30’ | Closing remarks |  | Mrs. Duong Thi To - Director of CECOD |

1. **Notable discussion and comments from participants**
2. **Training Dai Bai 1 (January 26, 2021)**

At the training session, the participants have raised pressing environmental issues in their home areas, the environmental and health protection measures taken by the households as well as proposed useful recommendations.

The sources of pollution identified by the participants include:

* Copper casting furnaces, which generate smog of metal dust.
* Polluted water ditch, with black and blue hews, from industrial zones in Thuan Thanh, flows from National Highway 17 to 284 Street leading.
* Solid waste containing metal dust from aluminum furnaces near Dai Bai primary school and Doan Bai village landfill.
* Wastewater from washing raw materials and polishing products of copper and aluminum foundries containing chemicals causes water pollution.
* Garbage from the stock of plastic and domestic waste in many residential areas.
* Pollution caused by burning straw.
* Contamination by from pesticides packaging.
* Poisoning due to high chemicals in food.
* Pollution caused by iron-contaminated wells.
* Some households receive aluminum slag of unknown origin and pour it into the pond to renew land.

Measures to protect the environment and health recommended by participants include:

* Use labor protection (masks, protective clothing, boots).
* Households regularly clean their houses. However, the dust pollution is high, so the cleaning is not thorough.
* The village's domestic waste is transferred to the district's domestic waste treatment plant, but not thoroughly, and the landfill in the Doan Bai area causes pollution for the surrounding people.
* There is clean water to use for daily life, but many families still use surface water or drilled well water to wash vegetables and wash clothes.

 Recommendations and suggestions of participants:

* Request the Commune People's Committee and superior agencies to:
* Check and fine households who buy aluminum slag to pour in the village.
* Require production households to install chimneys to treat aluminum casting furnace exhaust.
* Do not pour chemical production wastewater into the environment.
* Take measures to treat the landfills of Doan Bai village and set up the dumping sites for the production households.
* Guiding people to take measures to protect their health to prevent pollution.
1. **Training Dai Bai 2 (January 27, 2021)**

Because most participants in January 27 training programs are officials and local leaders, their perspective offer a great insight on the current efforts and environmental problems of Dai Bai. The participants have objectively evaluated pressing environmental issues in the craft village, propose feasible solutions for environmental protection and community health in the locality, and offer valuable constructive criticism for the development of the initiative.

The sources of pollution identified by the participants include:

* Pollution of dust, solid waste and wastewater produced from aluminum and copper casting households both in industrial clusters and production households in residential areas.
* Households in the craft village discharging wastewater and domestic waste at the wrong prescribed places.
* Some other establishments in other localities hiring people in Dai Bai village to stealthy discharge waste (aluminum slag), causing environmental pollution.
* The district's centralized incinerator has stopped working, leading to the untreated amount of domestic waste at the gathering points that have not been promptly treated, causing frustration among the people.

The current problems that the trainee observed:

* Measures to protect the environment and health are currently only implemented at a simple level such as using labor protection (masks, protective clothing) but there is no separation between the production area and the home living place leading to carrying pollutants from the production area into houses, increasing the risk of pollutants, especially children.
* The local police force has monitored and arrested several cases of waste with unknown origin being poured into the village ponds; requested the owner of the vehicle to handle it.

Recommendations and suggestions of participants:

* The Provincial People's Committee and the District People's Committee implement the wastewater treatment project and support production households in the craft village to install exhaust treatment systems to minimize pollution.
* Planning landfills or having solutions to treat trade village solid waste, preventing the current situation of pouring waste into the empty land and rice fields, which endangers community health.
* Strengthen training classes to guide people to take measures to protect their health and prevent pollution.
1. **Locals’ perspective and opinions toward the training programs**
2. **Local’s perspective on current situations of their village**

Almost all participants partcipated in the programs have negative feeling and opinion towards the current situation of their village, and are not satisfied with the current work of the government to help adress this issue. They acknowledge that the problems is complicated, and the government and DONRE alone may not be able to fix it, yet they felt the urge to demmand for more stringent and adequate changes, as the living standards is current unbearable. Some officials state that the current solution in place may not be enough for the next few years, as pollution is growing, but the measures to combat it lags behind. Below is a statement from one participant.

*“With the current situation, the solution for us to solve the environmental issue is extremely difficult, each locality has a landfill, but we cannot handle it and the demanded capacity. But it cannot be treated because there is no mechanism in place, such as there is no transporting or processing system. We can treat the waste with fuel, but it would leads to harmful dust. Last time when we tried that method, the entire residential cluster of Ngoc Xuyen nearby could not sleep all night. Through today's training session, I have learnt profoundly, but yet, I urge the higher authorities to work with more institutions to help us find a solution.”*

Mrs. Nguyen Thi Huyen (Secretary of Doan Bai village, People Committee of Dai Bai)

Across the repsonses of the participants, it is also clear that the pollution situation not only create health related implications, but economical issues. The practices of this craft villages interfere with the means of living for agriculture household, polluting the source of watering for nearby rice fields. It also distorted the ecosystem here, especially fish.

*“The environmental issue affects the agricultuer cultivation practices of the people around here, the fields are in Dai Bai area, the industrial cluster is also nearby. Every time the cluster discharges water, the canal becomes dark, with green and white hews. To be honest, it looks revolting, and smell even worse. The problem is that the water source is limited, and if pumped the water on rice, it is likely to kill the rice, so we’ve reach a dilemma. Not to mention, the fish with its head up is dead white, the water it discharges is too dirty for them to survive.”*

Mr. Nguyet Viet Tung (Director of a Cooperative in Dai Bai)

*“At present in our Hai Thai village, the situation of the handicraft village is very serious, especially solid waste. Many people have voiced their that aluminum waste from households is dumped into areas such as rice fields have contaminated the soil that could be used for planting. Industrial wastewater has not been treated, and is often dumpted into nearby ditch. The heavy metal pollution in Dai Bai is alarming, we have a landfill to cope with this situation but it will only take about 1-2 years until it is completely full. I hope this comment can be used to restructuring the current system.”*

Mr. Le Duc Khoi (Head of Hai Thai Village, Dai Bai Commune)

1. **Overall comments on the locals opinion toward the training program**
* **Dai Bai Training program for villager (26 January 2021):**

Participants are very interested and excited about the knowledge they learned about metal pollution (especially lead pollution) from the investigation results report by Mr. Dao Nhat Dinh and Mr. Ha Minh Ho. They ask many questions and participate in discussions, positively expressing their opinions around the contents that have been discussed at the training class. At the end, most participants grasps the gravity of the situation and express serious motivation for implementing change.

People in Dai Bai trade village wish to have many more intensive training courses to provide knowledge about controlling environmental health risks from metal recycling activities for people in the craft village, and at the same time they want to be supported to invest in projects to treat pollution to ensure health for the community.

* **Dai Bai Training program for (27 January 2021):**

After attending the training program, the delegates presented a lot about the solutions that could implemented in the craft village, the advantages and disadvantages of the solutions. They also recommended us to developed and support more intensive training courses to provide knowledge about controlling environmental health risks from metal recycling activities to a large number of people in the craft village for the general public to know how and prevent harm.

* **Overall**

At the closing remarks, all participants express their gratitude towards the training program, as they felt that not only this initiative improve their understanding, it signals a change in their village since more highly recognized international institutions started to care about their seemingly mundane but important problems. However, some express the need of more intensive training programs, with a wider scope to furthur raise awareness and find a balance sustainable plan.

1. **Media coverage**
* Articles on Bac Ninh Department of Natural Resources and Environment web portal:

<http://stnmt.bacninh.gov.vn/news/-/details/57412/tap-huan-nang-cao-nhan-thuc-va-tang-cuong-nang-luc-kiem-soat-rui-ro-suc-khoe-moi-truong-tu-hoat-ong-tai-che-kim-loai-tai-lang-nghe-chau-khe>

* Article on Bac Ninh Newspaper

(Waiting for the Editorial Board to approve the article)

* News on TV Bac Ninh province

(Waiting for more information on class videos to complete the news)