



Final Report

“Chemicals: The Warning Signs”

Target Area(s):	Sangthong District, Vientiane Prefecture, Lao PDR
Target Group (s):	Farmers & villagers Chemical product buyers & sellers Development partners & government authorities
Project Duration:	4 months (Nov 2008-Mar 2009) Planned 9 months (Nov 2008-Jul 2009) Actual
Funding:	CUSO VPF : \$4,731.00 USD (\$5000.00CND) LEAP : \$5,500.00 USD
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Project Partners:	.CEDS-NUoL ¹ .Sangthong Governor .Sangthong DAFO ² , WREA ³ & Health office
Support by:	.CUSO Canada – Volunteer Partnership Fund (CUSO VPF) .Lao Extension & Agriculture Project (LEAP)



¹ CEDS – Center for Environment Development Studies / NUoL-National University of Laos

² DAFO- District Agriculture & Forestry Office

³ WREA-Water Resources & Environment Authority



I. Introduction

SAEDA, the Sustainable Agriculture & Environment Development Association (Formerly SAF SAEDA) works to support vulnerable communities by introducing & promoting sustainable agriculture practices, and improving their capacity & awareness to safeguard the environment & natural resources. SAEDA achieves this with activities & projects focusing on three main areas of intervention: sustainable agriculture training services & extension promotion, chemical impact research & advocacy, and biodiversity study & conservation.

“Chemicals: The Warning Signs”, is a small but important research & information development activity to help promote awareness of the impacts of chemical inputs among Lao farmers & consumers. The project aimed to conduct research & data collection in 5 target villages (Ban Pakton, Ban Nasa, Ban Napor, Ban Huay La and Ban Huay Hang) in Sangthong District, Vientiane Prefecture, where reliance on chemical agriculture agents is more & more common, and impacts are already identifiable.

The project was comprised of two main activities: research & data collection carried out primarily by 3 faculty members from the Center for Environment Development Studies (CEDs) at the National University of Laos (NUoL), while SAEDA carried out farmer, consumer & seller surveys & interviews, in addition to producing an informative VCD showcasing various stakeholder first hand accounts of their experience with chemical agriculture agents.

The project ended up running for 9 months (from November 2008 to July 2009). The project was co-funded, with a total operating budget of \$10,224.11USD, receiving \$5000CND (\$4,724.11USD) from the CUSO Volunteer Partnership and \$5,500USD from LEAP. The CUSO Volunteer Partnership Fund supported the costs of human resources & field activities, while LEAP supported resource materials production & distribution costs.

The project saw 230 participants of which 68 were women (about 30%), and 35 sectors (5 sectors from the Central Vientiane level, 15 sectors from the Sangthong district level and 15 village level sectors)

II. Goal & Objectives

2.1 Project Goal

To raise awareness about agricultural chemical input use & impacts

2.2 Objectives

Short Term

- Collect Chemical use & impact data & disseminate information
- Raise awareness about organic alternatives
- Produce useful farmer friendly information & instructional materials in Lao language about chemical use & impact
- To provide a forum to exchange lessons between farmers, extension workers and government development partners & authorities, as well other stakeholders in other relevant & related sectors
- To provide information on chemical use & impact in Sangthong to local authorities, for short & long term use for resource & awareness raising purposes

Long Term

- To raise awareness about Chemical use & impact at the district, provincial & national level
- To provide information to policy makers and facilitate access to resources highlighting the impacts of chemical use in order to continue raising awareness through advocacy campaigns & supporting comprehensive policy development
- To reduce, ideally prevent the use of chemical agriculture inputs, including pesticides, herbicides, fertilizers and fungicides.
- To facilitate the creation of Sustainable Agriculture Farmer Groups by supporting links between CUSO and PRORICE trained farmers, regrouping both coordinated and uncoordinated farmers in the area.
- To disseminate available information & resources, as well to collect & consolidate new data for new resource material development & distribution
- To produce curriculum resources for CEDS-NUoL

2.3 Actual

- The projected goal “*To raise awareness about agricultural chemical input use & impacts*” was achieved. Draft versions of resource materials and video were tested and presented/screened in Sangthong District, and beyond, including



Xiengkhuang province based projects at the provincial and district levels, and Vang Vieng based projects at the district level.

- All short term objectives were successfully achieved
- The following long term objectives have already been fully or partially achieved
 - . To raise awareness about Chemical use & impact at the district, provincial & national level
 - . To provide information to policy makers and facilitate access to resources highlighting the impacts of chemical use in order to continue raising awareness through advocacy campaigns & supporting comprehensive policy development
 - . To disseminate available information & resources, as well to collect & consolidate new data for new resource material development & distribution
 - . To produce curriculum resources for CEDS-NUoL

III. Human Resources

3.1 Planned

Team leader

- Mr. Thongdam Phongpichith-SAEDA with support provided by local DAFO & LWU partners

3.2 Actual

Team leaders

- Mr. Thongdam Phongpichith-SAEDA
- Mr. Bae Pheaxay-CEDS-NUoL

Team members

- Ms. Surichanh – CEDS-NUoL
- Mr. Phet – Faculty of Forestry-NUoL

Local team members

- Mr. Liemvila- DAFO Sangthong
- Ms. Khuaychai- WREA Sangthong District

3.3 Explanatory Comments

It became apparent that in order to serve the best interests of the project as well keeping in mind our longer term goals regarding advocacy about this issue that we should team up with CEDS & NUoL. Being the National University of Laos, it afforded us, as well the University the opportunity to access as well produce resources beneficial to the project, the University as well SAEDA in the short & long term. Involving CEDS contributed to more comprehensive research & data collection & analysis, as well expanding the potential outreach of the information & resources produced by gaining direct access to thousands of students, other educational institutions with links to the university, as well various government ministries & authorities, with regard to policy enhancement where this issue is concerned. Also, due to the limited amount of time available to collect and analyze the data effectively & accurately, in addition to producing audio-visual support materials, we required the support of experienced and qualified partners, which we were certain & able to find at CEDS.

IV. Target Area & Group

4.1 Planned

- 8 Villages (Ban Pakton; Ban Napor; Ban Nasa; Ban Huay La; Ban Huay Hang; *Ban Sakai*; *Ban Kua*; *Ban Zoi*)
- District Governor
- DAFO
- LWU
- Local Health agents
- Chemical Merchants

4.2 Actual

- Total 230 participants attended, of which 30% were women
- 35 organizations participated in the project (5 organizations from the central level (Vientiane), 15 organizations from the district level and 15 from the village level. *(See Annex)*)
- Interviewees (4 district officials, 5 villages about 164 families and 7 shops)

1. Sangthong Governor	1 person
2. Sangthong DAFO	2 people
3. Sangthong WREA	1 person
4. Sangthong District Health Authority	1 person
5. Ban Pakton (30% of total families)	53 families
6. Ban Napor (30% of total families)	17 families
7. Ban Nasa (30% of total families)	43 families



- | | |
|--|-------------|
| 8. Ban Huay La (30% of total families) | 29 families |
| 9. Ban Huay Hang (30% of total families) | 22 families |
| 10. Merchants in Sangthong | 3 shops |
| 11. Merchants in VTE capital | 4 shops |

4.3 Explanatory Comments

Available information helped us to identify 5 villages where chemical use was higher which were then prioritized as a result of time constraints which led us to focus on 5 villages instead of 8 as originally planned

V. Activities & Timeline

5.1 Planned

#	Activities	Nov 08	Dec 08	Jan 09	Feb 09
1	Meeting with project team	X			
2	Meeting with DAFO and selected community members	X			
3	Meeting with heads of villages	X			
4	Interview/ film target villagers	X			
	Interview/ film DAFO & LWU extension workers	X			
	Interview/ film chemical selling shopkeepers in Sangthong district	X			
	Interview/ film agriculture traders	X			
	Interview/ film pesticide selling shopkeepers in Vientiane		X		
	Interview/ film PAFO extension workers		X		
	Interview/ film hospital staff & doctors		X		
5	Data analysis & summary		X X		
6	Booklet & Video Draft Design & Edit		X X X	X X	
7	Testing of Draft Booklet & Video			X	
8	Booklet & Video Final Edit			X X X	
9	Information Exchange Workshop			X	
10	Project Evaluation & Review			X	
11	Reporting				X

5.2 Actual

#	Activities	Nov 08	Dec 08	Jan 09	Feb 09	Mar 09	May Jun 09	Jul 09	Aug 09
1	Team meeting & building (SAEDA & CEDS/NUoL)	X							
2	Data collection methodology & research tool design	X							
3	Pre-Coordination with local Sangthong partners & authorities	X							
4	Sangthong partner meeting & field activity planning	X							
5	Target village selection	X							
6	Preliminary data collection	X							
7	Agribusiness Impact Exchange Workshop	X							
8	Field survey data collection & video interviews		X						
9	Video editing & data collection review			X					
10	Community & partner participatory resource material testing			X					
11	Additional data collection & video capture			X					
12	Data collection review & video editing continued				X				
13	Final evaluation & review workshop					X			
14	Project Progress Report					X			
15	Final field visit video capture (Chemical spray application footage)						X		
16	Final video & resource material edit							X	
17	Research project report submission								X

November 2008:

- .SAEDA meeting with CEDS partners and team building (Leader and members).
- .Data collection methodology & survey tool design.
- .Pre-coordination with local Sangthong partners & authorities



Nov 24- Dec 4, 2008:

- . Field planning with local partners
- . Target village selection

Nov 26, 2008

- . Meeting with Sangthong partners: Governor, Health, DAFO and WREA

Nov 27, 2008

- . Exchange workshop about the impact of agribusiness in Sangthong, organized by MCC⁴ and DAFO. SAEDA presented information about chemical products; impacts on health and environment; and future impact for sellers & consumers, illustrating main beneficiaries from chemical trade.

Dec 1-31, 2008

- . Field survey & Interviews (*Methodology: interviews, field visit and observation*)
 - + December 1, Ban Huoy LaPakton
 - + December 2, Governor and DAFO
 - + December 3, WREA and the Sangthong health office
 - + December 28, Ban Pakton
 - + December 29, Ban Napor
 - + December 30, Ban Nasa
 - + December 31, Ban Huoy Hang

Jan 2009

- . Video editing
- . Data collection review

Jan 29-31, 2009,

- . Participatory Community resource material testing – documentation & audio-visual (*total of 23 participants of which 8 were women*)
 - Testing with Sangthong Governor, DAFO, WREA, LWU, LYU, Health, Education, Commerce, LNFC, Lao trade Union Federation. (*There were 13 participants, of which 5 were women.*)
 - Testing in Ban Khok Hair, Sangthong District. (*There were 10 participants, of which 3 were women.*)
 - Additional data collection & video capturing

Feb 2009

- . Continuation of data review
- . Continuation of video editing

March 5, 2009

- . Exchange and strategy planning workshop. (*There were 43 participants, of which 10 were women*)
 - NUoL presentation of research findings and suggestions (*See attached DOC & PPT reports*)
 - Presentation of final VDO draft - 8 segments (4 farmers, 1 Governor, 1 DAFO, 1 WREA, 1 Health office)
 - Presentation of organic agriculture activities in Sangthong overview by PRORICE representative
 - Open panel discussions with organic expert farmers and conventional chemical using farmers
 - Question and Answer period
 - Strategy planning: 3 working groups (1 extension worker group and 2 farmer groups)
 - Sharing, discussion and suggestions open forum exchange
 - Summary of problems and future short and long term strategizing. (*See Annex 1c*)

March 2009

- . Video editing ongoing based on testing feedback
- . Research data analysis ongoing
- . Resource material design and development

April-Jul 2009

- . Final draft video capture & resource material editing

August 2009

- . Project reporting & materials handover

⁴ MCC – Mennonite Central Committee



5.3 Explanatory Comments

Ban Khok Hair, a non target village was chosen for it's neutrality in order to optimize the possibility of objective & constructive testing of resource materials, as the village had not been exposed to any prior information or organic agriculture promotion activities. Some of the comments included: that it was the first time the community had access to such information; that it now understands the potential risks & ramifications, and that community members were now in a position to reconsider their future options in regard to chemical use. Suggestions for the video included reducing it's length, additional photos & footage of farmers using agri-chemicals, but otherwise they understood the content & found the information valuable & varied. The video has been re-edited with these suggestions applied. Ex: video was over 60min long, is now 45min.

VI. Output & Results

6.1 Planned

- Interviews with key actors conducted
- Relevant chemical use & impact data collected & analyzed
- New Information Resource materials developed
- Awareness raised among Lao farmers, consumers & Government development partner extension workers
- Exchange workshop organized
- Project evaluation & report

6.2 Actual

- Interviews carried out according to plan
- Relevant chemical use & impact data collected & analyzed (See Attached Doc & PPT Report)
- Chemicals the Warning Signs VCD – (See 6.3 Explanatory Comments; attached VCD & Annex 2)
- English & Lao language Chemicals the Warning Signs Brochure (See Attached)
- Bilingual Chemicals the Warning Signs Poster (See Attached)
- Lao Language Bio-Pesticide brochure (See Attached)
- Lao language Sustainable Agriculture – Chemical impact manual (See Attached)
- Activities organized & surveys carried out served as an awareness raising advocacy platform in the area; distribution of research findings & accompanying VCD & materials will serve to further advocate the issue at all levels
- Exchange workshop organized according to plan (See Annex 1)
- Project Evaluation organized according to plan (See Annex 1)
- Interest has already been raised; with discussions & informal as well formal meetings held with FAO, PAN AP & Thai Field Alliance to replicate/expand similar research activities & resource tools/information creation, targeting other affected areas in Laos
- SAEDA in follow up partnership with CEDS/ NUoL are in the process of developing proposal for Chemical Study project with PAN AP as already planned and agreed between all three parties
- Ministry of Agriculture & Forestry (MAF) has already expressed interest in resources and report
- Meetings already held with Governor & local government offices. District Government offices in other provinces & areas have already expressed interest in acquiring a copy of the resources to incorporate into their extension activities (Ex: DAFO Sanghtong, Xanakham, Khoun, Pek, Vang Vieng and more)
- Capacity building: technical skills transfer between CUSO cooperant & SAEDA partner in media production & editing, supporting SAEDA to become self sufficient, avoiding having to outsource a camera person & editor, saving significant costs in the short & long term. Mr. Thongdam Phongphichith has for the first time, but not the last, succeeded to shoot & edit entirely independently his first SAEDA informative video for mass distribution.

6.3 Explanatory Comments

- In order to complete the video based on recommendations made during video testing with relevant stakeholders as well our own observations :

.we needed to capture additional footage showcasing farmers in the process of preparing & applying chemicals, which seasonally does not happen until May-June.

. shorten some of the segments

. incorporate short voice-over introducing each segment

- Originally we had in mind to produce a 30 minute video, however the interviews carried out and subsequent accounts revealed led us to extend the video length to 67 minutes, contributing to the prolongation of editing time required (See Annex 2) However we have since shortened the video to 45min based on recommendations.

- The project plan & subsequent proposal was formulated in a very constrained amount of time to meet submission deadlines, having been informed shortly before the deadline, as such certain details such as chemical application



seasonal constraints were not factored in at the time, contributing to our inability to provide a final version of the resource materials at this time. This very short planning period also caused us to reconsider our partnerships, hence the addition of CEDS-NUoL. Also to keep in mind is that this was a first time attempt to collect comprehensive data about the chemical issue in Sangthong, and as the data collected increased, so did the scope of the project not only in content but in its relevance and importance within not only the Sangthong context but the Lao context. Such type of research activities have yet to be carried out in Laos, specifically in conjunction with resource materials in Lao language being produced and disseminated publically to key stakeholders, more importantly to often misinformed farmers. As such it became even more important for us to ensure that we capture as well illustrate our findings comprehensively, contributing to a prolongation of the project activity implementation & completion period to ensure a quality output, not allowing the project to be compromised by time constraints potentially imposed by a time constrained project plan & subsequent proposal submission. With that, it should be noted that despite the changes we implemented in human resources, additional activities and extended timeframe, which only served to improve the project, we did not go over budget, keeping in line with initial total budget estimates for both CUSO VPF & LEAP.

VII. Budget Expenditure Summary

- A detailed disbursement report along with receipts will be forwarded to CUSO Canada & LEAP along with copies of the final VCD & accompanying produced resource materials
- We were awarded \$5000.00CND from CUSO VPF, however to facilitate expenditure tracking, amounts were converted to \$USD

Items	CUSO VPF			LEAP		
	PLANNED	ACTUAL	BALANCE	PLANNED	ACTUAL	BALANCE
	(\$USD)	(\$USD)	(\$USD)	(\$ USD)	(\$ USD)	(\$USD)
I. Meetings/Field data collection/ Interviews	1,087.80	1,093.60	(5.70)			
- Transportation (vehicle, gas, maintenance)	450.00	450.00	0.00			
- Board and lodging	421.20	447.30	(26.10)			
- Per diem of Government partners/fee	84.00	84.30	(0.30)			
- Materials	26.90	32.30	(5.40)			
- Contingency	105.70	79.60	26.10			
II. Booklet & Video Design Draft & Testing	262.20	229.60	32.60			
- Transportation (vehicle, gas, maintenance)	150.00	150.00	0.00			
- Board and lodging	70.20	59.70	10.50			
- Per diem of Government staff	12.00	19.90	(7.90)			
-Contingency	30.00	0.00	30.00			
III. Booklet & Video Final Editing & Production				5.500	782.25	4,738.41
-Video Filming & Editing				500.00		
				*(1000.00)	782.25	238.41
-Resource Material/VCD copying & distribution				2,000.00	0.00	
				3,000.00		
				*(2,500.00)	0.00	0.00
IV. Information Exchange Workshop	641.00	570.83	70.17			
- Transportation (vehicle, gas, maintenance)	100.00	122.63	(22.63)			
- Board and Lodging	93.60	113.20	(19.60)			
- Per diem for Governor and Director	23.40	23.60	(0.20)			
- Lunch and snack	300.00	201.90	98.10			
- Travel of farmers	50.00	35.40	14.60			
- Activity organization & coordination	28.00	23.60	4.40			
- Materials	10.00	17.50	(7.50)			
- Contingency	36.00	33.00	3.00			
V. Human Resources & Administration	2,740.00	2,616.10	123.90			
- Team leader (50 days* 2 person \$42/ day*)						
- Team member (20 day* 2 person* \$22.50/ day)	2,100.00	2,100.00	0.00			
- Administration (Paper, Printing, Copy, Tel/Fax, Reporting)	440.00	440.00	0.00			
	200.00	76.10	123.90			
VI. Final Video Shoot & Edit	0.00	220.97	0.00	0.00	238.41	0.00
Total (I+II+III+IV+V+VI)	\$ 4,731	\$ 4,731.10	(\$0.10)	\$ 5,500	\$ 4,500	\$4,500



7.2 Explanatory Comments:

- As a result of partnering up with CEDS, not originally planned, we had to adjust our budget plan in accordance with agreed upon human resource service fees as well related field work costs
- The remaining Human Resource balance totaling \$1,050.00 (CUSO VPF) is to be paid out upon successful completion & submission of final report & video by the respective team leaders (1 SAEDA; 1 CEDS), having agreed to an initial 50% service fee payment, with the remaining 50% payable upon final submission
- It was verbally as well in writing agreed between LEAP & SAEDA that video production & editing budget costs could be adjusted/re-arranged, increasing the video production/editing budget from \$500USD to \$1000USD, while decreasing the materials/VCD copying & distribution budget from \$5,000USD to \$4,500USD, still maintaining the original total budget at \$5,500USD
- As a result of needing to return one final time to Sangthong to capture missing footage of farmers applying/spraying agri-chemicals, remaining balances from originally planned activities totaling \$459.38USD were used to cover this unplanned additional activity, without exceeding overall respective donor budget allowances and agreements.
- Once final drafts of materials & VCD are approved by LEAP, copying and distribution will be carried per LEAP within the agreed upon \$4,500USD budget, unless otherwise indicated & subsequently agreed upon between LEAP & SAEDA.

VIII. Conclusion

As a first attempt in bridging the information gap about chemical use & impact in Lao PDR, the project not only proved that the issue is in fact an issue in more ways than one. It clearly illustrated the need for such research projects to be carried out, facilitating the development of informative resource materials, which are Lao farmer friendly. The project supports information access, to ensure that not only are potentially vulnerable consumers able to make informed decisions, but are also not misinformed, led to believe that the little bit of information they do receive is actually accurate. Right now the only information readily available in Lao language is the information provided by agribusiness promoters, and agri-chemical merchants & traders, whose advertisements & posters are readily visible in the areas they target across Lao PDR. The findings in Sangthong are only but a small indication of the problem on a larger scale, with already vulnerable communities falling prey. As such, SAEDA is grateful to have had the opportunity to carry out this project. It is a first in many steps we are committed to taking to further analyze the actual prevalence of this issue, its subsequent impact, in the hopes to inform not only farmers & the general public, but also policy makers, in order to both safeguard human health & environmental health. Using this project as a stepping stone, the following steps will be taken:

- 1- The research report and VCD will be disseminated at all levels, and will be showcased at public events, providing very important access to information, providing first time opportunities at the public level of information access, highlighting the causes & effects of chemical use & sale in Laos
 - < National workshop on agro-chemicals, which will be co-organized by MAF, FAO-IPM and SAEDA in the year 2009
 - < Presentation for students in Center for Environment Development Study (CEDS) and National University of Laos (NUOL)
- 2- Carry out more specialized studies on the impact of chemicals (blood, soil, water analysis...) *Meetings already held with interested national & regional partners with attached funding support available*
- 3- Produce media, new resource materials including brochures, posters and booklets for advocacy and campaign. **Ex:** *Chemicals: The Warning Signs* resource tool kit
- 4- Support sustainable agriculture and organic farmers groups
- 5- Provide information to local government authorities as well policy makers in order to support comprehensive policy development & implementation (many government authorities, especially at the district level are poorly informed, and since meeting with us, have indicated a resolve to review their district strategies, but have also indicated a lack of resources to help educate their community members, as such the materials from this project as well future ones are required & greatly appreciated as they will facilitate information dissemination).



ANNEXES

1) Exchange Workshop & Evaluation Meeting Participant Feedback Summary:

a) Lessons learned:

- Negative impact on human health, livestock and environment
- High investment cost/high price
- Not appropriate for farmers in long term
- Not food safe
- Contributes to soil degradation / poor soil quality over extended period of time
- Negative Impact on biodiversity
- Farmers cannot produce by themselves, as such not sustainable
- Yield tends to decrease year by year after extended use
- Contributes to food insecurity
- Not conducive to social welfare & livelihood health / disturbs the peace

b) Summary of comparison discussion between AGRO-CHEMICAL and SUSTAINABLE AGRICULTURE

Item	Agro-chemical	SA
Investment cost/ external inputs	Increase	Decrease
Yield	Decrease	Increase
Economic security	Decrease	Increase
Livelihood	Decrease	Increase
Environment	Decrease	Increase
Health	Decrease	Increase
Social	Decrease	Increase
Cultural	Decrease	Increase

c) Participant Comments and Suggestions Summary

- Government should play pro-active role & assume responsibility to control chemical imports, sale and application.
- Increase & continue to carry advocacy campaigns which demonstrate the negative impacts of chemicals
- Promote sustainable agriculture (demonstration plots)
- Funding support
- Carry out specialized technical research (blood, water, soil analysis....)
- Organize more study tours and exchange workshops
- Organize more trainings on sustainable agriculture alternative techniques (bio-fertilizer, bio-pesticide....)
- Facilitate organic farmer group creation so that farmers are more organized & empowered
- Agriculture extension workers should provide technical, monitoring & evaluation support
- Promote livestock production
- Communities should be able to manage the land and forest by themselves (no contract farming and no land concession)
- Promote the development of Community savings banks to mitigate debt & need to take out bank loans etc...



2) VCD Segment Content Summary

Total duration: 44.57 minutes



Introduction:

Mr. Seng Meuang – Sangthong Deputy Governor

- . General overview of Sangthong's geographic, demographic & socio-economic statistics
- . Signed letter to initiate recommended actions to control chemical trade & subsequent use by farmers in Sangthong
- . Suggests more coordinated efforts between Sangthong and neighboring districts to help mitigate & control chemical impacts in the area



Segment 1:

Mr. Ny – Contract Sprayer / farmer

- . Married w/ 2 children
- . Worked as a contract sprayer for 3 years; applying as much as 35/ 200L tanks of agri-chemicals per day/ Stopped 2 years ago
- . While spraying, fainted repeatedly; took medicine after every spraying, however still developed problems
- . Earned high income but stopped – aside from own health problems was warned by friends & family
- . Was often instructed to apply concentrated amounts of chemicals, contrary to recommended instructions
- . Now suffers from persistent side effects including muscle weakness & nerve damage- lost feeling in hands
- . He recommends that if farmers have not yet tried using chemicals, they should not as the revenue is not worth the loss of health and additional costs incurred as a result of needing repeated long term medical attention indicating that he will never ever fully recover his health.



Segment 2:

Mr. Thong – Contract Sprayer / farmer

- . Has been using chemicals for 15 years.
- . Suffers from muscular problems in his legs; has gone to Thailand twice medical check ups & was told twice his problems are symptomatic of chemical exposure: fainting; muscle weakness & pain; bloody nose; stomach cramps
- . He used to not use any safety precautions, preparing the chemical mix with his bare hands, but now is more safe
- . He cleans his drums/ chemical tanks nearby ponds & streams
- . Water from stream is no longer potable
- . This year, 1 buffalo died, poisoned as a result of eating sprayed vegetation; other livestock have died in the past



Segment 3:

Mr. Tu Lo – Farmer

- . DAFO used to promote Fordidone / he used it for 5 years
- . He suffers from persistent skin irritations & other health problems which he medicates but cannot cure with prescribed medicines
- . Has gone to Mahosot hospital in Vientiane twice and as well to some dermatologists; but his health & skin problems are not curable only manageable.
- . His problems stem both from general exposure from prolonged use, as well a damaged pump which leaked chemical insecticide, causing permanent skin irritations
- . He stopped ten years ago
- . He says he would never use chemicals again, no matter how much money he was offered.



Segment 4:

Mr. Bounsou – Contract Sprayer/ Farmer

- . Bought his chemicals in Thailand where sellers are very well informed about which chemicals to use for which type of crops
- . Explained that many farmers from Sangthong go to Thailand for day labor, to work as sprayers, leaving in the am & returning in the pm
- . Import of problematic Vietnamese corn seeds, farmers are going into debt, unable to harvest corn with no legal recourse, are forced to take loans further exacerbating their debt
- . He was forced by his employer to apply concentrated amounts of chemicals against package instructions; a week after application he would notice that surrounding vegetation & grass would die
- . He himself now suffers from a variety of health problems including: back problems; heart problems – palpitations; muscle pains; arthritis; bloody nose; often feels lethargic. Skin irritations in the form of black spots always appear after use. Disappear in off season, but reappear during spraying season.
- . He would like to stop, but feels that he is trapped



Segment 5:

Mr. Kongchai – Sangthong Health Office

- . Claims agro-chemicals were first introduced in Sangthong in 1990, starting with herbicides
- . Says that there are a lot of chemicals in the food products sold
- . In 2007-2008, there was a significant increase in patients treated with headaches, nervous system & sleep problems as well skin irritations symptomatic of chemical exposure; some causes as simple as farmers not washing the clothes they wore when spraying, wearing clothes repeatedly causing skin reactions
- . Chemicals used for seed control are causing many problems
- . Hospital does carry out village outreach medical service activities
- . Last years floods exacerbated the impact of chemicals; the Ministry of Health sent a lot of medicine to Sangthong, but it was not enough to treat all the patients; many people had to rely on traditional alternatives including herbs



Segment 6:

Mr. Boun Yo – Sangthong WREA

- . 70% increase in chemical prevalence in 2007
- . 9800L of herbicide sold in shops/ 2348L of seed control/ 4980L of snail killer/ 13 682 kg of fertilizer
- . In 2008: 24,120L of herbicide sold in shops/ 6 430 L of snail killer/ 23,447 kg of fertilizer (These do not include all the illegal as well individual/private imports and sales)
- . Traders sell at higher price
- . Weeds beginning to develop resistance/ immune to chemicals – continue to grow
- . Most popular pump sprayer model used in Sangthong is the #170 pump
- . On average 5L/yr of chemicals consumed in one form or another per family in Sangthong
- . Related environmental impacts include: water pollution; soil erosion, loss of biodiversity & aquaculture
- . WREA Sangthong is a signatory to the letter recommending initiatives to control chemical trade in Sangthong



Segment 7:

Mr. Bou Nyong – Sangthong DAFO

- . Estimates at sub-district level based on Kunban findings indicate that a minimum of .5Tonnes of pesticides available & used
- . 200 livestock have already perished
- . Various environmental impacts including water pollution & loss of fish species
- . Farmers do not take the necessary precautions; are not safe when using chemicals
- . People spray their gardens near their homes, as well areas near open shops including pharmacies
- . Fordidone which is banned in Laos was found and is being sold under the guise of a changed label
- . DAFO Sangthong is a signatory to the recommendation letter to initiate chemical trade control in the area
- . Mr. Bou Nyong suggests that there is a need to now follow up & implement monitoring measures based on the recommendations made in the letter; organize information workshops & campaigns as promote SA & organic options



Conclusion:

Mr. Seng Meuang – Sangthong Deputy Governor

- .Sangthong’s strategy plan:
 - . Promote food security
 - . Market development & production
 - . Stop slash & burn in upland areas
 - . Organize inter-departmental future planning workshops
 - . Follow up & implement recommendations listed in letter to control chemical trade in Sangthong
 - . Hold open meetings to help raise awareness in community, with general public, farmers & consumers
 - . Mobilize extension workers to advocate & teach about impacts
 - . Invite all stakeholders to study & continue research & exchange information
- .Sangthong is grateful to SAEDA, and welcomes SAEDA to continue with research activities & SA promotion in Sangthong in the short & long term

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