



Asociación Interamericana para la Defensa del Ambiente

Interamerican Association for
Environmental Defense

Associação Interamericana para a
Defesa do Meio Ambiente

Association Interaméricaine pour
la Defense de l'Environnement

MEMORANDUM

TO: Honorable Members of Congress

FROM: Anna Cederstav
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DATE: September 23, 2002

SUBJECT: Department of State report to Congress regarding aerial coca eradication in Colombia

According to the chemical procurement provision of the *Foreign Operations, Export Financing, and Related Programs Appropriations Act*, (Public Law No. 107-115, 115 Stat. 2117 (2002), Title II)

...funds appropriated by this Act that are used for the procurement of chemicals for aerial coca fumigation programs may be made available for such programs only if the Secretary of State, after consultation with the Administrator of the Environmental Protection Agency, the Secretary of the Department of Agriculture, and, if appropriate, the Director of the Centers for Disease Control and Prevention, determines and reports to the Committees on Appropriations that: (1) aerial coca fumigation is being carried out in accordance with regulatory controls required by the Environmental Protection Agency as labeled for use in the United States, and after consultation with the Colombian Government to ensure that the fumigation is in accordance with Colombian laws; (2) the chemicals used in the aerial fumigation of coca, in the manner in which they are being applied, do not pose unreasonable risks or adverse effects to humans or the environment...

In an attempt to comply with the requirements of this law, and after consultation with the Environmental Protection Agency (EPA) and Department of Agriculture (USDA) but not with the Centers for Disease Control and Prevention, the Department of State (DoS) recently submitted to Congress a *Report on Issues Related to the Aerial Eradication of Illicit Coca in Colombia*.

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This memo comments on the DoS report to Congress and outlines the main reasons for our conclusion that the DoS has failed to meet the conditions established by the chemical procurement provision. Rather than resolving doubts concerning the use of a broad-spectrum herbicide for the purposes of coca eradication in Colombia, the report, and particularly the EPA consultation document, underscores the risks posed to human health and the environment. Further, the report makes clear that there is not sufficient information available about environmental and human health impacts and measures implemented to mitigate such impacts. In light of the potentially serious environmental and public health risks associated with the aerial eradication program, and because of the DoS failure to demonstrate that the above conditions are being met, we strongly recommend that the Committee on Appropriations withhold funding for the chemical eradication program.

I. Requirement to determine and report that the spraying program “is being carried out in accordance with regulatory controls required by the Environmental Protection Agency as labeled for use in the United States.”

We conclude that the DoS fails to demonstrate compliance with this requirement as discussed below.

The formulated herbicide product used in Colombia is not used in the United States

It is important to note that in spite of a recent official registration in the United States that may seem to lend some credibility to the DoS decision to use this substance in Colombia, this product “has never been marketed in the United States.”¹ Because the producer “decided that they did not want to market a Glyphosate product with a ‘Danger’ signal word,” the product was labeled “Not for use in the United States.” In November of 2001, seeking to “register a Glyphosate product that corresponds to the product being used in Colombia,” the product was re-registered to permit use in the United States.² However, the producer has no intention of marketing the product in the United States.³

Failure to demonstrate that the use in Colombia complies with EPA label instructions

DoS states that “Tab 1 of the report illustrates that the Glyphosate formulation used to spray coca in Colombia is used in accordance with the EPA label instructions.” However, the EPA consultation report to DoS does not justify this claim. The fact that “EPA confirms that application rates are within the parameters listed on US Glyphosate labels” cannot be interpreted to mean that all label requirements are met. A closer analysis of the EPA consultation report shows that there are in fact many reasons why the use in Colombia specifically does not comply with the label conditions in the United States.

I. Failure to demonstrate that use in Colombia constitutes “non-agricultural” use

¹ Response from EPA Assistant Administrator Johnson to Secretary of State, August 19, 2002, p. 3.

² Response from EPA Assistant Administrator Johnson to Secretary of State, August 19, 2002, p. 14.

³ Personal conversation with Monsanto representatives.

The DoS reports that “the glyphosate formulation used to spray coca in Colombia is used in accordance with the EPA label instructions for non-agricultural use.”⁴ It is true that the use rates in Colombia are in accordance with the label for non-agricultural use in the United States. However, the State Department fails to demonstrate that the use in Colombia is in fact appropriately categorized as “non-agricultural” use. This is not an assumption that can be made without considering the actual conditions of use and exposure in Colombia. The DoS provides no data that supports an assertion that the use in Colombia constitutes non-agricultural use, and EPA at no point certifies that the use for coca-eradication in Colombia would be appropriately classified as such.

We hold that the Glyphosate use in the Colombian anti-narcotics program is not appropriately classified as “non-agricultural use.” According to the EPA, “the intended US uses are for undesired vegetation in and around crop fields, forests, industrial areas, and residential areas.”⁵ The label for the product that has been used to date states “This product is for use on plants in non-crop and non-timber areas only. Not for use on crops, timber, or other plants being grown for sale or other commercial use....”⁶ These conditions of non-agricultural use do not hold in Colombia, a fact that has substantial implications for human exposure.

It is well known that Colombian farmers intersperse food and coca crops, and plant coca in fields adjacent to food crops. Thus, food crops are frequently sprayed along with coca crops. The State Department appears to defend this practice by reporting that “according to Colombian law, food crops that are interspersed with coca are subject to spraying.”⁷ While this practice may be legal in Colombia, the spraying of food crops or crop areas is certainly not consistent with US “non-agricultural” use of herbicides, as per US EPA regulatory requirements.

The Colombian Public Defender has received a great number of complaints of food crops that have been sprayed as part of the Colombian coca eradication program. While EPA assumed that food crops that have been sprayed will be allowed to go to waste, economic conditions in Colombia make it far more likely that subsistence farmers with little or no knowledge of the risks associated with contacting recently sprayed crops will harvest and eat these crops, if at all possible. The exposure resulting from such harvesting and consumption could be significant.

Non-agricultural use scenarios in the United States are also ones where there is no immediate worker re-entry into fields that have been sprayed, because “in the US, most uses of Glyphosate are applied to kill weeds – which are the target.” With only undesirable plants being sprayed, US “non-agricultural use” consists of applications of concentrated solutions of herbicide where there is little or no worker contact with the sprayed plants. By contrast, in Colombia, where “coca bushes grow to approximately chest level and are harvested mainly by leaf pulling 4 to 5

⁴ Memorandum of Justification Concerning Determination on Health, Environmental, and Legal Aspects of Coca Eradication in Colombia

⁵ Response from EPA Assistant Administrator Johnson to Secretary of State, August 19, 2002, p. 18.

⁶ Label for Pesticide with Registration number 524-308, confirmed by the EPA as the pesticide in use for the aerial eradication program.

⁷ Chemicals Used for the Aerial Eradication of Illicit Coca in Colombia and Conditions of Application, US DoS, September 2002, p. 5.

times per year,” representatives from DoS have indicated that “growers will prune the coca plants, immediately after spraying, in order to salvage the coca crop. Specifically...workers may enter fields immediately after spraying in order to prune or pull off the coca leaves in order to prevent the coca plant from dying.”⁸ In light of this worker exposure scenario, the spraying program is not appropriately classified as “non-agricultural use,” and should not be permitted to occur using the high concentrates and herbicide application rates characteristic of such use. Rather, the spraying should be conducted following limitations set for agricultural use.

2. Failure to comply with conditions for agricultural use

The herbicide that DoS has used to date is not permitted for use in the United States – under any conditions – in agricultural applications. Thus, no direct comparison is possible. However, considering related but less toxic products, it is clear that the spraying program in Colombia uses much greater total quantities and higher concentrations of herbicide than permitted for agricultural use in the United States. EPA notes that use in US “agricultural sites average less than 0.75 pounds of the active ingredient Glyphosate per acre”⁹ as compared to the approximately 3.3 lbs per acre that is being applied in Colombia. Similarly, US EPA agricultural use labels for significantly less toxic formulations permit the use of a maximum of 29.4% solutions,¹⁰ while in Colombia a 44% solution of the more toxic formulation is applied.

3. Failure to comply with methods of application that would be mandated in the US

Even if the use of Glyphosate in the Colombian coca-eradication program were appropriately classified as non-agricultural use, EPA notes that the methods of use in Colombia are not similar to those that would be expected for forestry use in the US. The EPA states “it is not clear how closely this use approximates that for coca eradication. Glyphosate is typically applied to forestry sites using helicopters at air speeds of 50-70 knots.... Application to forestry sites by fixed wing aircraft, if practiced at all, is extremely rare;”¹¹ and “Most U.S. labels for forestry and right-of-way use of glyphosate suggest application by helicopter. Since application in Colombia is done by fixed-wing aircraft, it is likely conducted at a higher speed and from a greater altitude than would be typical in the U.S.” As a point of comparison, the DoS states that application is usually carried out from an altitude of less than 100 ft¹² while US labels suggest application from less than 10 ft.¹³ This difference in application altitude gives rise to a much greater risk of drift and thereby potential contact with non-target species and populations.

The EPA also states “For products registered for use in the United States which have high acute toxicity to the eye, mitigation of exposure to potential eye effects for post-application workers is done by lengthening restricted entry intervals (REI).”¹⁴ Clearly, such REIs would apply if this

⁸ Response from EPA Assistant Administrator Johnson to Secretary of State, August 19, 2002, p. 18.

⁹ Response from EPA Assistant Administrator Johnson to Secretary of State, August 19, 2002, p. 4.

¹⁰ EPA label for Roundup Ultra, a product related to but significantly less toxic than the one used in Colombia.

¹¹ Response from EPA Assistant Administrator Johnson to Secretary of State, August 19, 2002, p. 8.

¹² Chemicals Used for the Aerial Eradication of Illicit Coca in Colombia and Conditions of Application, US DoS, September 2002, p. 5.

¹³ EPA label for Roundup Ultra, a product related to but significantly less toxic than the one used in Colombia.

¹⁴ Response from EPA Assistant Administrator Johnson to Secretary of State, August 19, 2002, p. 20.

product were used in the United States. It is unlikely that the DoS can guarantee that REIs are enforced in Colombia.

In summary, because the DoS fails to demonstrate that in Colombia the type of use (agricultural vs. non-agricultural or non-crop), the methods of application (type of aircraft used, application heights) and precautions to protect the local population (restricted entry intervals) are consistent with US label requirements for this and related products, the DoS has not justified the statement that aerial eradication “is being carried out in accordance with regulatory controls required by the Environmental Protection Agency as labeled for use in the United States.”

II. Requirement to determine and report that “the coca spraying is in accordance with Colombian laws.”

We conclude that the DoS fails to demonstrate compliance with this requirement as discussed below.

In an effort to comply with the above requirement, the DoS supplied Congress a brief letter from the Ministry of Foreign Affairs. With the exception of stating that an environmental management plan (EMP) is being implemented, the letter contains no substantiating data or background information regarding the laws that apply to the program, or how these are enforced. Rather, Congress is asked to accept the word of the Colombian Ministry of Foreign Affairs that no laws are being violated in the implementation of the spraying program. This is unacceptable considering that other Colombian Government authorities such as the Public Defender’s Office have expressed strong concern that the aerial eradication program violates numerous Colombian laws.¹⁵

The promise that an EMP is now being implemented, in no way proves compliance with Colombian laws. Quite to the contrary, the Colombian EMP is an exemplary case illustrating how the aerial coca eradication program has continually violated Colombian laws designed to protect citizens and the environment. The EMP for the spraying program was approved by the Ministry of Environment only as recently as November 26, 2001 (Resolution 1065). Until that date, the EMP could not be approved because of the failure of the Colombian Narcotics Agency (DNE) and DoS to provide sufficient information about the program and to design adequate mitigation measures. Even though there is a strict Colombian legal requirement that an EMP must be authorized and implemented prior to the realization of any aerial eradication activities, the DNE and DoS carried out aerial eradication activities for five years prior to the eventual EMP approval. Thus, the program was until very recently carried out in flagrant violation of Colombian environmental laws.

Moreover, it is not clear whether the Colombian EMP that is now in force is in fact being implemented appropriately. As recently as December 2001, DNE argued before the Colombian

¹⁵ Amicus Curiae, Posición de la Defensoría del Pueblo, La Ejecución de la estrategia de erradicación aérea de los cultivos ilícitos, con químicos, desde una perspectiva constitucional. (Amicus Brief - Position of the Colombian Ombudsman Office on the Eradication of Illicit Crops through Aerial Application of Chemicals), 2001.

Ministry of Environment that DNE did not have the authority or capacity to implement said plan. Given this recent uncertainty as to how the EMP would be enforced, further evidence of EMP implementation should be provided by DoS. The DoS should provide Congress and the EPA with a minimum of:

- a detailed summary of the requirements of the plan and a thorough description of how these are being met;
- copies of the policies adopted and materials developed in compliance with the plan; and
- third-party auditing verifying implementation of the plan.

In addition, DoS should respond to the concerns raised by the Colombian Public Defender and Comptroller's Offices with respect to alleged non-compliance with Colombian laws.¹⁶ These concerns include claims that the eradication program violates:

1. The Constitutional rights to life, health, a healthy environment, and public participation.
2. Law 30 of 1986, article 91 (Anti-drug Act) requiring authorization from the environmental and health authorities prior to the implementation of eradication activities.
3. Law 21 of 1991, ratifying ILO Convention 169 regarding the right to prior consultation of indigenous communities.
4. Law 99 of 1993, and Decree 1753 of 1994, (recently replaced by Decree 1728 of 2002), requiring Environmental Licenses or the implementation of an Environmental Management Plan for activities that can harm the environment.
5. Decree 1843 of 1991, regarding the use and management of pesticides. (Based on the fact that the concentration authorized for use by the agricultural authority (ICA) is different from the one applied. Also with regard to requirements regarding flights, distance, management, disposal of hazardous wastes, etc.)
6. Law 472 of 1998, protecting the collective right to a healthy environment, the right to conserve the equilibrium of ecosystems, and public health.

The DoS should also address concerns that the DNE and DoS, in implementing the eradication program, have failed to consider input from other Colombian government authorities including:

1. The requirement for a Plan of Epidemiological Oversight, proposed since 1982 and ordered in 1992;
2. Recommendations from the National Pesticide Council; and
3. A recommendation for technical audits that guarantee independence, transparency, and participation of the affected population.

III. The requirement that the DoS determine and report that “the chemicals used in the coca spraying, in the manner in which they are applied, do not pose unreasonable risks or adverse effects to humans or the environment.”

We conclude that the DoS fails to demonstrate compliance with this requirement for the reasons discussed below.

¹⁶ Defensoria Statements dated February 9, 2001 and April 16, 2001; Defensorial Resolution February 12, 2001.

Failure to appropriately consider the toxicity of the formulated product used in Colombia

With regard to human health, the EPA notes, “the surfactant used in the formulated product reportedly can cause severe skin irritation and be corrosive to the eyes, as would be expected for many surfactants. The label for the formulated product used in the coca eradication program in Colombia includes the “Danger” signal word. These findings suggest that any of the reports of toxicity to the eye may be due to the surfactant, not Glyphosate per se. The product has been determined to be toxicity category 1 for eye irritation, causing irreversible eye damage.”¹⁷

From EPA’s statement, it is clear that it is the particular formulated product used in Colombia, and not the active pesticide ingredient (glyphosate), that is of concern. Because the studies that the DoS presents were not conducted using this specific formulation and also do not consider the high concentrations at which this substance is used, the numerous studies focusing on glyphosate or other glyphosate-containing products do not address the specific issue of concern in Colombia.

The EPA presents data regarding historic illnesses involving the eye due to formulated glyphosate product use in the United States.¹⁸ This information shows that there were significant health problems associated with exposure to these products prior to the reformulation to reduce surfactant levels that pose a hazard to the eye. Even today such problems occur although with reduced frequency. And this is true even though past and present use of these products in the United States generally occurs at much lower concentrations and rates of use than those applied in Colombia. Therefore, health problems would be expected to occur with much greater frequency as a result of the Colombian spraying program. Based on this information and knowledge of the risk associated with the particular formulation that DoS has been using in Colombia, the EPA recommended that the DoS switch to a lower toxicity formulated product.

To date, the DoS has ignored this EPA recommendation and continues using the same formulated product, even though the DoS is now clearly aware of the risk such use poses to the local population.

The inert ingredients in the formulated product used may never have been subject to a thorough risk assessment and toxicological evaluation.

US law does not require a full risk assessment and toxicological studies for inert ingredients, such as the surfactant in the formulated product that is known to cause irreversible eye damage. For example, developmental toxicity, reproduction, sub-chronic, chronic feeding, or carcinogenicity and mutagenicity studies are not regularly conducted on inert ingredients. Similarly, risk assessments are not conducted for all inert ingredients.

The EPA report is unclear as to whether or not a risk assessment has been conducted for the inert ingredients used in the Colombian spray mixture. Whereas the EPA states that the inert ingredients in the formulation “have been approved,” the EPA also states that more than 3,200

¹⁷ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 11.

¹⁸ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 11.

inert ingredients are cleared for use in pesticide products even though only some of these have been undergone a complete risk assessment. This raises questions as to whether the inert ingredients of the pesticide that is currently registered but not used in the United States, but that is used extensively by the DoS in vast areas of Colombian tropical ecosystems, has ever been subjected to a thorough risk assessment. Because these surfactants are not new products, it is unlikely that they have undergone toxicological testing in accordance with modern, scientific standards.

Failure to present incident data demonstrating the lack of human health impacts

The DoS did not present the EPA and Congress with any scientifically valid incident data for the coca eradication program. Without such studies, it is impossible to conclude that the program poses no unreasonable risk to human health or the environment. Given the lack of quality data and the inability of EPA to make any determination with regard to incident health impacts, EPA recommended that DoS conduct “prospective tracking of reports of health complaints, documenting times of exposure and onset of symptoms” for future spray operations. This would allow DoS to “evaluate any potential health effects and ameliorate or prevent their recurrence.”¹⁹ It is not clear whether DoS intends to comply with this recommendation. However, in the absence of such studies, DoS cannot affirm that no unacceptable human health impacts result from the coca eradication program. This is especially the case in light of the numerous Colombian reports of health impacts in areas being sprayed.

The DoS provided EPA and Congress with some information on incident data for poppy spraying. Unfortunately, this data is of little use because the concentrations and total amounts of herbicide used for poppy spraying are much lower than those used in coca eradication.²⁰ According to the EPA,

A direct comparison of the epidemiological data in Colombia (which is from aerial application to poppy) to the conditions of use, (as presented at the April 18, 2002 briefing for aerial application to coca by DoS to OPP risk assessors), would be limited. The briefing and the materials provided did not address the conditions of use for poppy. Nor was the Agency provided any human incident data for the coca eradication program. ... DoS informed EPA that the application rate for poppy was lower than that for coca. ... Other details of the differences between the two spray programs have not been supplied to the Agency. Specifically, the Agency has no information as to the exact makeup of the tank mixture sprayed on poppy, or whether the same Glyphosate product and adjuvants used in the coca eradication program were used in the poppy eradication program. The Agency also has questions as to the geographical area differences, the frequency of repeated applications and the size of the area treated on each spray mission. Therefore generalized conclusions drawn from human incident data as a result of application to opium poppy, in comparison to conditions of use for the coca eradication should be made with caution.”²¹

¹⁹ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 11.

²⁰ Information provided by the Colombian Narcotics Agency to Colombian Senator Jaramillo, 2001.

²¹ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 11.

Even so, EPA reports that “there are data to suggest that the poppy spray eradication program could have resulted in” minor symptoms. However, because the studies were poorly executed and lacked key detailed information such as medical documentation of symptoms or on timing of application, no firm conclusions could be drawn.

Failure to take immediate measures to protect human health

The DoS attempts to justify its decision to continue short-term use of the more toxic product, despite EPA recommendations to the contrary.

1. Presumption of limited human exposure

The DoS claims that EPA believes that “the risks of eye damage from the current population are limited principally to the handlers and mixers of the concentrated formulation as opposed to the general public.”²² This is a misrepresentation of EPA’s assessment. While EPA notes that “The greatest potential for eye exposure is expected for workers mixing and loading the concentrated Glyphosate product,” EPA further concludes that “there is also the potential for eye exposure as a result of entering treated fields after treatment to perform pruning or harvesting activities.”²³ In fact, EPA’s review of US incident data showed that “illnesses due to residue were often the result of extensive contact with soil or foliage recently treated.”²⁴ Considering that the DoS has stated that farmers frequently enter the fields immediately post spraying, such exposure would be expected to be substantial in Colombia.

The EPA notes “For products registered for use in the United States which have high acute toxicity to the eye, mitigation of exposure to potential eye effects for post-application workers is done by lengthening restricted entry intervals (REI).”²⁵ The DoS provides no information as to how it is limiting field reentry of farmers harvesting food or coca crops post-spraying.

The DoS states that it is working with the government of Colombia to warn local citizens to avoid the spray mist and inform them of precautions to take in case of contact with the spray mixture. While this is an excellent initiative, the fact that DoS is “working with” the GOC provides no information as to the effectiveness of these programs. Spraying should not be conducted unless there is certainty that the affected communities have prior warning of the spraying and have received information regarding precautionary measures to take. If this is not yet the case, it is not appropriate for the DoS to continue spraying.

2. Presumption that the tank mixture is not toxic

The DoS emphasizes that “approximately 75 percent of the end use product is water” and uses this fact to argue that the final tank mixture will not have toxic effects on humans. While it is

²² Memorandum of Justification Concerning Determination on Health, Environmental, and Legal Aspects of Coca Eradication in Colombia. P. 1.

²³ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 12.

²⁴ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 32

²⁵ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 20.

true that the final tank mixture contains 75% water, much of the concentrated formulated product is also water. Thus, the concentrate is in reality only diluted by a little more than one half prior to spraying. As it is doubtful whether a substance that causes irreversible eye damage as a concentrated product would be rendered harmless when diluted by approximately 50%, the DoS treatment of this information is misleading.

The DoS reports preliminary results of an ongoing toxicity study of the tank mixture. These studies have not yet been completed or reviewed by the EPA and therefore are not yet appropriately discussed.

3. The presumption that effective safeguards minimize drift

The DoS states that numerous safeguards are in place to minimize human exposure to the spray mixture, including careful pilot training, and permissible spray parameters to minimize drift. However, the DoS provides no concrete evidence, and the EPA has not been able to verify that these safeguards are effective.

EPA modeling shows that drift may affect areas up to 600 feet from the targeted crops.²⁶ Reports of damage to legitimate crops issued by the Colombian Public Defender's office is consistent with this information and indicate that spraying is not nearly as carefully conducted as the DoS claims. While EPA notes that "there is potential for exposure to bystanders in areas near those targeted for spraying," EPA concedes that "if all procedures are adhered to and operational equipment is in working order" it "is likely that drift is minimized."²⁷

The DoS apparently reported to the EPA that quantitative spray drift studies have been performed and that limited on-site ground inspections demonstrate that little drift occurs. However, EPA was never provided with either the drift-study or the evidence showing that this is the case. Further, EPA was not provided with any of the primary source materials describing the safety precautions associated with the program.²⁸ In absence of verification that the Environmental Management Plan contains appropriate safeguards and is adequately enforced, the assumption that effective safeguards prevent human exposure is unjustified. If DoS intends to use these operating restrictions to demonstrate the absence of environmental and human health risk, then DoS must present that data and obtain independent third party verification of effective procedures to minimize drift and accidental spraying. The data presented to date allows for no conclusions as to whether or not the spraying program is managed appropriately.

Inadequate assessment of new formulated product to be used

As a result of the consultation with the EPA, the DoS has selected an alternative, supposedly lower-toxicity formulation for future use. While this may be a positive step, we must note that in so doing the DoS is bringing Congress, the EPA, and the public back to the starting point of having little or no information about the potential impacts of the spraying program. It is also

²⁶ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 51.

²⁷ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 11.

²⁸ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 20.

noteworthy that while the State Department claims it is switching to a new formulation with lesser toxicity, Colombia's Defense Minister Martha Lucia Ramirez recently confirmed her government's intention of returning to the use of a previously applied, "more powerful" herbicide product for the eradication program.²⁹ Thus, there is once again significant confusion as to what exactly will be sprayed in Colombia.

According to the DoS report to Congress, the new product that DoS plans to use was only registered in the United States as of July 2002, and therefore lacks a record of use in the United States. The DoS provides no information as to the contents of this formulation or the spraying conditions under which it will be used other than stating that it is less toxic than the previously used formulation. It is unclear from the report to Congress whether DoS consulted with the EPA as to the health and safety impacts of the new product. The DoS states that it has not yet conducted toxicity testing on tank mixtures of this formulation and that those tests will be performed only when the new formulation is available for mixing in field conditions.³⁰

DoS should not be permitted to side step the requirement of reporting to Congress, subsequent to EPA consultation, by simply deciding to change the formulation that is used. Prior to appropriations of funds for the spraying program, this new formulation should be subjected to the same level of rigorous testing, scrutiny, EPA consultation and Congressional reporting as was the case for the last product used. Congress must not permit the DoS to again use the Colombian local population as test subjects for determining whether or not the chemical product used causes human health harms.

Failure to adequately evaluate potential environmental impacts

The aerial eradication program in Colombia has never been subject to an environmental impact assessment (EIA) in Colombia. Although representatives of the State Department have at times referred to the existence of an EIA developed by the Department, no such document has ever been produced. It thus appears that the environmental impacts of this vast aerial eradication program have never been evaluated.

Without first conducting a thorough analysis of all potential environmental impacts, including an evaluation of alternative eradication methods, it is impossible for the DoS to report that there are no unreasonable adverse environmental impacts associated with the eradication program. To be acceptable, such an EIA would have to consider not only impacts to areas sprayed, but also the impacts of the overall eradication program. This would include the harm that occurs when coca-growers whose fields have been destroyed by spraying move into more remote regions of the rainforest to create new fields that they hope will not be soon discovered. The continual displacement of coca farms with the concomitant increase in deforestation and opening of new forest regions to settlement is possibly the greatest adverse impact associated with the aerial eradication program. It appears that this impact has been ignored to date. This is a grave and unacceptable omission in the consideration of impacts.

²⁹ El Tiempo, August 26, 2002.

³⁰ Department of State's Comments on EPA August 19, 2002 Letter, p. 1.

In addition, we have a series of concerns with the DoS evaluation of impacts for the regions where spraying occurs. These are described below.

1. Failure to consider site-specific data in assessment of impacts

The DoS report asserts that there are no unreasonable risks or adverse effects to the environment associated with a program that annually destroys most plant life on more than 300,000 acres of land located in one of the world's precious remaining biodiversity hotspots. In spite of this remarkable assertion, the report to Congress and the documents used for the EPA consultation include not one single study that examines the potential impacts on fragile tropical ecosystems such as those in Colombia or other nations with similar environmental and climatic conditions. The DoS provides no information regarding the fate of the pesticide in this environment. The DoS provides no information regarding plant re-growth rates or impacts on ecosystem composition in this environment. The DoS provides no information regarding impacts on endangered or endemic species in Colombia. Clearly, in the absence of such site-specific information, it is impossible for the DoS or EPA to draw firm conclusions regarding potential environmental impacts in Colombia.

The EPA recognizes this problem in stating that there is “a degree of uncertainty when attempting to extrapolate the data outside the experimental conditions of the studies, such as different soils, geographical regions, and ecosystems.” EPA emphasizes that “The toxicity of a pesticide to different classes of animals and plants can vary widely among species within an individual ecosystem. The Agency uses the test species as surrogates for other North American species not tested, but has little experience with tropical flora and fauna. Similarly, laboratory and field estimates of the environmental fate of pesticides, including potential surface-water contamination are performed with North American soils, hydrology, and climate data.”³¹ Because the site-specific data to which EPA refers was not available, it is not possible to accurately determine or report on the environmental impacts of this program.

2. Failure to appropriately consider environmental risks associated with pesticide drift

Based on scientifically validated modeling studies, EPA concludes there is a risk of spray affecting and killing 50% of young plants up to 600 feet (approximately 200 meters) from the edge of the plot being sprayed, in the direction of the prevailing wind.³² The DoS reports that the average plot size of coca crops in Colombia is 7 – 12 acres.³³ Such a plot could reasonably be expected to have an edge that is approximately 200 meters long. In a worst-case scenario of drift, as per the EPA model, the area impacted by drift would therefore be 200m x 200m or 40,000 square meters. In other words, the area impacted by drift in a worst-case scenario would be approximately equal to the area being sprayed.

The US Government has recently reported that it intends to significantly augment the coca eradication program and hopes to kill 300,000 acres of coca in the coming year.³⁴ If this were to

³¹ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 43.

³² Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 51.

³³ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 18.

³⁴ “U.S. Is Stepping Up Drive to Destroy Coca in Colombia,” New York Times, September 4, 2002.

be the case, up to 300,000 of non-cropped Colombian tropical ecosystem could be destroyed purely as a result of drift. This is clearly an unacceptable adverse environmental impact. While the DoS argues that actual drift affects much smaller areas than estimated by the EPA modeling, the DoS provides no data to demonstrate that this is so. Lacking clear evidence to the contrary, we must assume that the aerial coca eradication program causes severe environmental impacts in tropical regions of Colombia.

3. Failure to adequately consider environmental risks posed by the inert ingredients in the pesticide formulation.

As with human impacts, the DoS report and EPA assessment focus almost exclusively on the ecosystem impacts associated with the active ingredient in the formulated pesticide product. This is inappropriate, particularly in light of the known impacts of surfactants on aquatic ecosystems and fish. The EPA was unable to assess the risk to non-target terrestrial and aquatic animals from formulated Glyphosate used for coca eradication because the DoS did not provide the relevant toxicity data for the Colombian formulation.³⁵ Similarly, it does not appear that EPA was able to consider information regarding the environmental fate and transport, or environmental persistence of the inert ingredients in the formulation. In the words of the EPA, “none of the ecological effects studies submitted to or encountered by the Agency for Glyphosate were performed with the formulation that the DoS has indicated is used in Colombia, which may contain different types of cationic surfactants than those in formulations for which the Agency has data.” Thus, yet again, DoS has presented insufficient data to warrant a conclusion that the aerial eradication program in Colombia poses little environmental risk.

Summary:

Because the Department of State has not provided sufficient information regarding a) the exact composition of the herbicide formulation used for aerial eradication; b) information on the toxicological properties and site-specific environmental impacts of all the ingredients in the formulated product; c) detailed information as to parameters and safety precautions employed for the spraying program; d) independent verification that the mitigation measures of the EMP are implemented and effective; and e) detailed verification of full compliance with Colombian environmental law, it is not possible to consider that the Department of State has fulfilled the Congressional requirements for reporting under Title II of the *Foreign Operations, Export Financing, and Related Programs Appropriations Act*. In light of this fact, we recommend that the Appropriations Committee withhold financial support for the aerial eradication program.

³⁵ Response from EPA Administrator Johnson to Secretary of State, August 19, 2002, p. 45.

