



Asociación Interamericana para la Defensa del Ambiente

Inter-American Association for
Environmental Defense

Associação Interamericana para a
Defesa do Meio Ambiente

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Sociedad Peruana de Derecho
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AIDA MEMORANDUM

DATE: June 9, 2003

SUBJECT: Compliance with the Environmental Management Plan for the Plan Colombia Aerial Herbicide Spraying Program.

Introduction

To reduce illicit cultivation of coca and poppy in Colombia, the United States Department of State (DoS) collaborates with the Colombian National Directorate of Narcotics (DNE) in carrying out the Program for Eradication of Illicit Crops with Glyphosate (PECIG). Due to concerns of environmental and human health impacts associated with this extensive herbicide spraying program, the US Congress conditioned the appropriation of funds on certification by the DoS that the eradication program meet a series of conditions.¹ One of these is a requirement to certify compliance with the Colombian Environmental Management Plan (EMP). The EMP approved by the Colombian Ministry of Environment (MMA) for the eradication program obligates the DNE to take specific precautionary measures and report regularly on implementation progress and monitoring results to the MMA. This memo describes the most significant requirements for environmental and public health protection established in the EMP, along with the reporting requirements on EMP implementation.² The mandated reports indicate the extent of EMP implementation, and should be scrutinized prior to any Department of State or Environmental Protection Agency determination that the Plan Colombia EMP is effectively implemented.

Risk Characterization and Prohibition of Spraying in Sensitive Areas

The DNE must assess and report on the socio-economic and environmental characteristics of areas potentially impacted by the eradication program,³ and exclude high-risk areas from herbicide spraying. The MMA specifically ordered that “aerial spraying is not to take place in sensitive environments, such as populated areas, parks, natural reserves,

¹ Consolidated Appropriations Resolution, Pub. L. No. 108-7 (Title II, Department of State, Andean Regional Initiative), 117 Stat. 11, 172-174 (2003).

² The official Colombian EMP consists not only of the draft document submitted in November of 2001 by the DNE to the MMA in Colombia, but also of a series of MMA resolutions pertaining to the modification and approval of that draft. The DoS and DNE must comply with all obligations of the EMP, including those specified in the MMA Resolutions related to the EMP.

³ MMA, Resolución No. 341/2001, art. 5; MMA Resolución No. 1065/2001, p. 5.

aqueducts and bodies of water.”⁴ The EMP also prohibits spraying of areas with only small-scale drug-crop cultivation,⁵ as defined by the National Council on Narcotics (CNE).⁶ To determine which areas may and may not be sprayed, the DNE must first map all areas with illicit crops to a scale of 1:100,000.⁷ For populated or environmentally sensitive areas, the DNE must eradicate crops only via methods that guarantee social and environmental protection (for example manual eradication). Every quarter, the DNE must report to the MMA on the mapping and zoning of impacted areas, including the determination of which areas to exclude from spraying because of high socio-economic or environmental risk.⁸

The DNE must also comply with buffer zones that protect culturally, socially, economically or ecologically fragile areas. The EMP permits spraying only a minimum of:⁹

- 2,000 meters from natural protected areas;
- 2,000 meters from sub-paramos, fresh-water springs, and aquifer recharge areas;
- 2,000 meters from human settlements such as farmhouses or indigenous reserves;
- 1,600 meters from areas of socio-economic interest (legal farming areas); and
- 200 meters from static and running water bodies (lakes, lagoons, wetlands, streams, and rivers). The EMP states that case-specific circumstances may necessitate expansion of this buffer zone.

The DNE must report quarterly to the MMA on compliance with these buffer zones.¹⁰

For all areas where spraying is permitted, the DNE must observe the flight parameters approved by the MMA.¹¹ Among the most important parameters are:

- Flight’s altitude: less than 25 m for coca crops and less than 12 m. for poppy crops;
- Flight speed: 120-150 mp for T-65 aircrafts, and between 180-200 knots for OV-10;
- Droplet size: 300-1,000 μ ;
- Relative humidity: 75-90%, for coca crops, and 75%-80% for poppy crops, and;
- Temperature: less than 30 degrees Celsius for coca crops and less than 20 degrees Celsius for poppy crops.

Environmental Management at the Anti-Narcotics Bases

To minimize environmental harm in case of accidents, particularly associated with the transport, storage, and use of chemicals or hazardous materials, the EMP requires the DNE to develop contingency and environmental management plans for the anti-narcotics bases.¹² The EMP also requires reduction of solid waste generation at the anti-narcotics bases,¹³ appropriate management, separation and disposition of hazardous wastes,¹⁴ and collection and treatment of waste and wash waters.¹⁵ The DNE must test and monitor wastewaters for pH, DQO and glyphosate concentrations every quarter.¹⁶

EMP Requirements of the Social, Educational and Information Program

⁴ MMA, Resolución No. 1065/2001, p. 4, reinforcing MMA Resolución No. 341/2001, art. 4.

⁵ MMA, Resolución No. 341/2001, art. 5.

⁶ CNE, Resolución No. 0005/2001, August 11, art. 3.

⁷ Id.

⁸ MMA, Resolución No. 341/2001, art. 5.

⁹ MMA, Resolución No. 1065/2001, p. 5.

¹⁰ MMA, Resolución No. 341/2001, art. 5.

¹¹ EMP, Card 1: Spraying Operations Management Program, Chart 3.

¹² MMA, Resolución No. 341/2001, Art. 6; MMA, Resolución No. 1065/2001, p. 6.

¹³ EMP, Card 4: Solid Waste Management Program.

¹⁴ MMA, Resolución No. 1065/2001, p. 14.

¹⁵ EMP, Card 5: Sewage Management Program; MMA Resolución No. 1065/2001, p. 14.

¹⁶ MMA Resolución No. 1065/2001, p. 14.

The Social Management Program of the EMP requires DNE to establish a compensation program in accordance with prior CNE Resolution No. 017/2001.¹⁷ Key elements of this program are that DNE must support alternative development programs, provide economic compensation for damages to legal crops, and work to improve environmental and public health attention in affected regions.¹⁸ The EMP states that in accomplishing these goals, the DNE must work closely with and coordinate activities with other government agencies engaged in alternative development or provision of social services in the affected regions.¹⁹

The EMP also requires DNE to educate and inform all segments of the population, particularly the local communities, about the objectives, importance, and methods of spraying, environmental and social mitigation measures taken, the results of the monitoring and auditing programs, and processes for addressing complaints and compensating for harms.²⁰ DNE must publicize this information via the media, the Internet, and a monthly publication.²¹ Every quarter, the DNE must report to the MMA on the coordination of work with other government agencies and on progress made in community education programs.²²

Monitoring Requirements

The DNE must implement a comprehensive monitoring and oversight program for the crop-eradication program.²³ In particular, the DNE must verify that the spraying is not causing long-term environmental harm, and determine whether the spraying effectively reduces illicit crop cultivation.²⁴ The EMP also requires the DNE to conduct epidemiological studies²⁵ and contract external auditors for independent monitoring of the eradication program.²⁶

To assess whether the approved environmental controls are sufficient, DNE must monitor regeneration rates and ecological dynamics in test plots that are ecologically representative of the diverse ecosystems potentially impacted.²⁷ This monitoring requirement applies not only to directly sprayed coca and poppy fields, but also to water bodies, forests, biomass, legal crops and pasturelands that might be exposed to herbicide drift.²⁸ The EMP requires that DNE geo-reference the monitoring plots²⁹ and collect samples immediately post spraying, as well as 15 and 60 days thereafter. If persistent contamination is detected, additional sampling is required.³⁰ The EMP defines specific parameters and biological indicators to be monitored.³¹ The DNE has to report the results of the ecosystem monitoring to the MMA on a quarterly basis.³²

To evaluate the effectiveness of the spraying program in reducing drug-crop cultivation, the EMP requires DNE to annually assess the total area dedicated to illegal crops in each municipality, department (state), and nucleus (region).³³ Associated with this requirement, the DNE must monitor long-term trends in illicit crop production, including environmental and social changes in sprayed areas, and the impact of eradication efforts on the spreading of illicit crop cultivation to new areas. This includes an assessment of the extent to which the program

¹⁷ MMA, Resolución No. 1065/2001, p. 7.

¹⁸ MMA, Resolución No. 1065/2001, p. 12.

¹⁹ MMA, Resolución No. 1065/2001, p. 8.

²⁰ MMA, Resolución No. 341/2001, art. 9.

²¹ MMA, Resolución No. 1065/2001, p. 8.

²² MMA, Resolución No. 1065/2001, p. 12.

²³ MMA, Resolución No. 341/2001, art. 6; MMA Resolución No. 1065/2001, p. 9.

²⁴ Id.

²⁵ MMA, Resolución No. 1065/2001, p. 11.

²⁶ MMA Resolución No. 341/2001, art. 8; MMA Resolución No. 1065/2001, p. 11.

²⁷ MMA, Resolución No. 1065/2001, p. 11.

²⁸ EMP, Card 6 Inspection, Verification and Control of Spraying Operations.

²⁹ MMA, Resolución No. 341/2001, art. 7.

³⁰ MMA, Resolución No. 1065/2001, p. 11.

³¹ Id.

³² MMA, Resolución No. 341/2001, art. 7.

³³ EMP, Card 6; Resolución No. 1065/2001.

may be causing additional land clearing when coca and poppy farmers relocate.³⁴ The DNE must provide this annual report on overall program effectiveness to both the MMA and the local environmental authorities in the nine key areas subject to spraying.

Because the use of glyphosate for drug-crop eradication in Colombia has to date only been approved on an “experimental” basis,³⁵ the MMA also required DNE to study and report to the Colombian Agricultural Institute (ICA) on the extent of coca-plant recovery and regrowth.³⁶ In the event that higher concentrations of glyphosate, or a different herbicide mixture, would be more appropriate, the DNE must obtain approval from ICA and the Colombian Ministry of Health prior to changing the formulation used.

In approving the EMP, the MMA also ordered DNE to conduct an epidemiological assessment to monitor health impacts in local populations of areas where health harms from spraying has been reported. The Ministry of Health had previously issued guidelines for how DNE should conduct such assessments.³⁷ Moreover, the EMP requires DNE to collaborate with other government agencies to train hospital and health center staff in diagnosis and treatment of ailments caused by the spraying. DNE must also reimburse all expenses associated with the treatment of medical conditions demonstrated to have been caused by exposure to glyphosate.³⁸ (Note that Colombian government documents use the term “glyphosate” when referring to the spray mixture.)

Finally, in approving the EMP, the MMA reiterated the requirement that DNE must establish a system for independent outside inspections (technical audits) to verify that the PECIG is carried out in accordance with the EMP and to evaluate environmental, human health and agricultural impacts caused by the program.³⁹ These independent auditors must verify that the DNE is not spraying in natural protected or other sensitive areas, and that the DNE is observing defined buffer zones. The auditors must also verify that the data obtained in the EMP monitoring program in fact demonstrates that there are no adverse effects on soils, water resources, and public health. Guidelines for establishing the audits were previously defined by the CNE,⁴⁰ and the DNE must conduct a fully transparent bidding process for government contracts in hiring a qualified institution or firm to conduct the audits. The independent auditors must report the results of the independent monitoring to the DNE and the Technical Committee of the CNE every quarter. The reports must also be made available to the public.⁴¹

³⁴ EMP, Card 8: Environmental Monitoring Program.

³⁵ Colombian Ombudsman Office (Defensoría del Pueblo), *amicus curiae* submitted to the Colombian Constitutional Court, April 2002, p. 16.

³⁶ MMA, Resolución No. 1065/2001, p. 9.

³⁷ Ministerio de Salud, “Plan de Salud frente a la aplicación de herbicidas en la erradicación de cultivos ilícitos,” 1992.

³⁸ EMP, Card 8: Environmental Monitoring Program.

³⁹ MMA, Resolución No. 341/2001, art. 8.

⁴⁰ CNE, Resolución No. 0005/2000, art. 9.

⁴¹ MMA, Resolución No. 341/2001, art. 9.