



Mr. Anand Grover  
 Special Rapporteur on the Right of Everyone to  
 the Enjoyment of the Highest Attainable Standard of Physical  
 and Mental Health

srhealth@ohchr.org

28<sup>th</sup> November 2012

Dear Mr. Grover

**Request for intervention to uphold the right of everyone to the enjoyment of the highest attainable standard of physical and mental health – GM crops engineered to be resistant to the chemical, 2,4-D.**

1. This request is submitted by: the African Centre for Biosafety, the Network for a GM Free Latin America, the Pesticide Action Network, North America, GRAIN, Aquí el logo de la Red Nacional de Acción Ecologista (RENACE), and Terra de Direitos.

1.1 The African Centre for Biosafety (ACB) is a non-profit organisation, based in Johannesburg, South Africa. It has a respected record of evidence-based work in contributing to the GMO decision-making process; and protecting genetic diversity, traditional knowledge and seed sovereignty, built upon the values of equal access to and use of resources and support for the growing agro-ecological farming movement.<sup>1</sup>

1.2 The Network for a GE Free Latin America (Red por una América Latina Libre de Transgénicos (RALLT), was formed in 1999 by several peasants, environmental and human rights organizations to halt the expansion of genetically modified (GM) crops in Latin America and its adverse impacts on human health, food and farming systems, food sovereignty and the environment.<sup>2</sup>

1.3 Pesticide Action Network, North America (PANNA) works to replace the use of hazardous pesticides with ecologically sound and socially just alternatives. As one of five PAN Regional Centers worldwide, it links local and international consumer, labour, health, environment and agriculture groups into an international citizens' action network. For 30 years, the network has defended basic rights to health, livelihood and environmental quality.<sup>3</sup>

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<sup>1</sup> See, <http://www.acbio.org.za>

<sup>2</sup> See, [www.rallt.org](http://www.rallt.org)

<sup>3</sup> See, <http://www.panna.org>

1.4 GRAIN is an international, non-profit organisation that works to support small farmers and social movements in their struggles for community-controlled and biodiversity-based food systems.<sup>4</sup>

1.5 Red Nacional de Acción Ecologista (RENACE), is a national network in Argentina working on social and environmental issues.<sup>5</sup>

1.6 Terra de Direitos is a Human Rights Organization based in Brazil, acting in defense and promotion of human rights, mainly the economic, social cultural and environmental rights. The Organization works ensuring the right of farmers and traditional people to free usage of biodiversity and the recognition of traditional knowledge, enabling the free usage of genetic resources for food and for food and for the conservation of agrobiodiversity.<sup>6</sup>

## 2. About 2,4-D

2.1 The chemical, 2,4-D, was one of the active ingredients present in the now infamous 'Agent-Orange' chemical defoliant, used to devastating effect by the US military during the Vietnam War. Dow's 2,4-D-resistant GM maize has been developed in the face of widespread glyphosate-resistant weeds appearing on US farmlands. Such weed resistance could potentially undermine the biotechnology industry's glyphosate-tolerant crops (synonymous with Monsanto's 'Roundup Ready' brands), which still account for 85 per cent of all GM crops grown worldwide.<sup>1</sup> The herbicide 2,4-D was part of the security research for use as a chemical weapon during World War II.<sup>7</sup> Although the main health effects of Agent Orange were blamed on the other component of the mixture (2,4,5-T) and dioxin contamination, the data indicates that 2,4-D has significant health risks of its own. It remains unclear whether continuing low-level contamination of 2,4-D with dioxins or dioxin-like compounds plays a role.

2.2 The herbicide 2,4-D is included among the 'hormone herbicides', as it is meant to behave like the natural hormone, auxin, or indole-3-acetic acid (IAA). Plants naturally produce hormones, which are chemicals that perform precisely, and in very small quantities. Their concentrations are regulated internally by the plant, as in the case of naturally-produced auxin – a hormone that regulates the healthy plant growth and development. However, in its synthetic form it is produced at much higher concentrations that kill the plant in the absence of internal control and regulatory mechanisms.

2.3 The chemical 2,4-D is a systemic herbicide because it is absorbed through the leaves or roots and transported by the lymph throughout the body and internal tissues of the plant, reaching unsprayed parts. It accumulates in the growth regions and

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<sup>4</sup> See, <http://www.grain.org>

<sup>5</sup> See, <http://www.renace.net>

<sup>6</sup> See, <http://terradedireitos.org.br/>

<sup>7</sup> Bejarano, F. 2007. El 2,4D, de arma química a campeón de ventas para corporaciones transnacionales. En: 2,4-D Razones para su prohibición mundial. RAPAM, RAP-AL, IPEN. [www.rap-al.org](http://www.rap-al.org)

induces malformations that kill the plant. It is considered as one of the first 'selective' herbicides for killing broadleaf plants and controlling weeds in annual and perennial, cereal crops, sugar cane, pasture, industrial areas and lawns, home gardens and golf courses.

2.4 The use of 2,4-D is banned completely in Norway, Sweden and Denmark.<sup>ii</sup> In Canada, the use of pesticides containing 2,4-D on lawns is banned in Quebec, Newfoundland and Labrador<sup>iii</sup> and Nova Scotia. In 2010 the province of Alberta banned fertiliser-herbicide combinations, due to concerns that these products result in the overuse of 2,4-D and threaten the health of waterways. Ontario's Cosmetic Pesticides Ban Act, which took effect in 2009, has prohibited the use of 2,4-D for 'cosmetic uses' on outdoor residential and landscape areas, vegetable and ornamental gardens, parks and school yards. Manitoba plans to introduce similar legislation in late 2012 or early 2013.<sup>iv</sup>

### **3. The new generation GM herbicide-tolerant crops – industry's response to the 'super-weed' epidemic**

3.1 Millions of hectares of GM crops grown in the US, Brazil and Argentina are genetically engineered (GE) to resist glyphosate. These crops have, particularly in the US, become infested with glyphosate-resistant 'superweeds'. In other words, the GMOs and the glyphosate are not only failing, they are causing havoc in farmers' fields. Such weed resistance is potentially threatening the viability of the biotechnology industry's glyphosate-tolerant crops. These crops, which are synonymous with Monsanto's 'Roundup Ready' brand, account for 85 per cent of all GM crops grown worldwide.<sup>v</sup>

3.2 In response to the superweed epidemic, a new generation of GM crops resistant to older and even more toxic herbicides are now being introduced. These include Dow's 2,4-D-resistant corn and soybean; Monsanto's GM crops resistant to dicamba, a herbicide very similar to 2,4-D; Bayer's isoxaflutole-resistant soybean; BASF's imidazolinone-resistant soybean; DuPont's maize and soybeans resistant to ALS inhibitors and so forth. Indeed, 14 of the 20 GM crops currently pending approval in the US are all herbicide-resistant, some to three herbicides: 2,4-D, glyphosate and glufosinate.<sup>vi</sup>

### **4. Status of approvals of 2,4-D GM maize and soybeans**

4.1 On 15 May 2012,<sup>vii</sup> the Executive Council: Genetically Modified Organisms Act (the primary decision-making body in the Republic of South Africa concerning GMOs), approved Dow Chemical's variety of GM maize, DAS-40278-9, for importation as food, feed and processing.

4.2 This GM variety has been genetically engineered to withstand liberal applications of Dow's toxic chemical herbicide 2,4-D. The GM variety has yet to be approved for commercial growing anywhere in the world. Dow has lodged an application for commercial cultivation in the United States, where it is pending approval amid a

maelstrom of protest from diverse sectors of US society, ranging from public health professionals to US farmers.<sup>8</sup>

4.3 Dow has, during July 2012, applied to the South African GMO authorities for approval to import its GM soybean DAS-68416-4 for human consumption, animal feed and processing. This GM variety has been genetically engineered to withstand liberal applications of Dow's toxic chemical herbicide 2,4-D and Bayer CropScience's glufosinate ammonium.

4.4 DAS-68416-4 is pending approval in the United States and Canada for commercial growing. Dow is also seeking approval to import the GM soybean into Argentina, Australia/New Zealand,<sup>viii</sup> Brazil, the European Union (EU), Japan, Mexico, South Korea, and Taiwan. According to Dow, these approvals are necessary to 'mitigate global sensitivities to GE productions'.<sup>ix</sup> To date, only the Australia/New Zealand authority has approved it for import as food, feed and processing.

4.5 Dow has also sought approval for the cultivation of 2,4-D GM maize and soybeans in Brazil. However, pertinent information about these applications is being kept secret by CTN-Bio, the GMO approval body in Brazil. In Argentina, according to the website of CONABIA, the GMO decision-making body in that country, field trials are already underway, involving 2,4-D GM soybean and maize crops.

## 5. Health risks

5.1 The World Health Organisation's International Agency for Research on Cancer (IARC) classifies the Chlorophenoxy herbicide group, of which 2,4-D is by far the most widely used member, as 'possibly carcinogenic to humans'.<sup>x</sup>

5.2 Numerous studies in humans have reported an association between exposure to 2,4-D and non-Hodgkin's lymphoma, a cancer of the white blood cells.<sup>xi</sup> The first studies to link 2,4-D with non-Hodgkinson's lymphoma were published in Sweden over 30 years ago.<sup>xii</sup> Other studies have found that 2,4-D formulations are cytotoxic (damage and kill cells), mutagenic, exhibit hormone-disrupting activity,<sup>xiii</sup> and affect the function of the neurotransmitters dopamine and serotonin.<sup>xiv</sup>

5.3 Experiments in which lactating rats were fed low doses of 2,4-D revealed that the chemical inhibits breast-feeding from mother to pup<sup>xv</sup> and as a consequence, led to weight loss in the offspring.<sup>xvi</sup> 2,4-D and its formulations have been found to cause chromosome and DNA damage in hamster ovary cells,<sup>xvii</sup> the bone marrow and developing sperm cells of mice,<sup>xviii</sup> and sister chromatid exchange (which has been linked to the formation of tumours) in chicken embryos.<sup>xix</sup>

5.4 2,4-D is well known to drift, both directly and through volatilisation. Spray drift devastates adjacent ecosystems and poses a very real threat to rural economies and

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<sup>8</sup> See PANNA, 2012. "USDA Receives Over 365,000 Public Comments Opposing Approval of 2,4-D-Resistant, Genetically Engineered Corn", available at <http://www.panna.org/press-release/usda-receives-over-365000-public-comments-opposing-approval-24-d-resistant-genetically>

farmers growing non-2,4-D-resistant crops. Conventional farmers are at risk of losing crops while organic farmers will lose both crops and certification, resulting in an economic unravelling of already stressed rural communities.

5.5 If GM 2,4-D crops are to be adopted, the increase in the use of herbicide 2,4-D may increase 30 times by the end of the decade, according to expert estimates.<sup>xx</sup> In US agriculture alone, for example, the use of 2,4-D in corn will likely increase from 27 million to 100 million pounds. Exposure to this drift-prone herbicide—and resulting harms to human health, non-target organisms and non-resistant crops—will thus dramatically increase if GM 2,4-D crops are approved and planted.

5.6 We are particularly concerned that the GM maize will contain residues of 2,4-D, and in the case of the GM soybean, residues of both the 2,4-D and glufosinate ammonium and pose unacceptable risks to humans and animals. Our worries are compounded by the fact that herbicide residues on locally produced imported grains are not being tested in countries such as South Africa, Argentina, Brazil and the US.

## 6. Citizen action against 2,4-D GM crops

6.1 Several actions have already been taken by civil society organisations to reject the possible approval/deregulation of 2,4-D-resistant transgenic crops. In the USA, around 370 000 people – ranging from health practitioners to farmers – and 170 civil society organisations, signed a letter addressed to the USDA rejecting a possible deregulation of 2,4-D tolerant crops.<sup>9</sup> A group of medical doctors and health practitioners sent a letter to the USDA Secretary urging him to deny Dow's petition to deregulate 2,4-D-resistant corn.<sup>10</sup> Additionally, the organisation 'Save Our Crops Coalition' sent a submission to APHIS in relation to a possible deregulation of the 2,4-D tolerant corn.<sup>11</sup>

6.2 The Movement of Small Farmers (MPA) from Brazil, part of La Vía Campesina, convened a mass meeting in the Santa Catarina state, on the potential dangers of 2,4-D-resistant crops, and described them as a lethal threat to the health of farmers, consumers and the environment.

6.3 The African Centre for Biosafety (ACB) has, with the support of more than 7,500 individuals, 18 health professionals and 20 organisations from South Africa, petitioned the Parliament of South Africa to ban Dow's 2,4-D GM maize. We are of the view that such similar support exists to reject Dow's application to import its GM 2,4-D and glufosinate-resistant soybean into SA (DAS-6816-4). Ms C Dudley, MP, submitted the petition to Parliament from the African Christian Democratic Party, on 7 August 2012.<sup>12</sup> The petition was tabled in Parliament on the 15 August 2012, and has been

<sup>9</sup> <http://www.panna.org/press-release/usda-receives-over-365000-public-comments-opposing-approval-24-d-resistant-genetically>

<sup>10</sup> Letter to Secretary Vilsack on Docket No. APHIS-2010-0103 (Petitions, Plant Pest Risk Assessments, and Environmental Assessments; Availability: Dow AgroSciences, LLC, Corn Genetically Engineered for Herbicide Tolerance) .April 27, 2012.

<sup>11</sup> Comment of SOCC – Docket No. APHIS – 2010-0103.

<sup>12</sup> The petition can be viewed at [http://www.acbio.org.za/ACB\\_2,4-](http://www.acbio.org.za/ACB_2,4-)

submitted to the Portfolio Committee on Agriculture, Forestry and Fisheries for consideration and report back to Parliament.<sup>13</sup>

6.4 In Brazil, the campaign 'Brazil Organic and GMO-Free and Agrochemicals' and the 'Campaign Against Pesticides and for Life' has denounced the propaganda used by biotechnology companies that GM crops would reduce pesticide use. This strategy of the biotechnology industry served to hook farmers into using a 'technology package', resulting in Brazil being the world's largest consumer of pesticides since 2008, and the second largest producer of GM crops by acreage, with huge negative impacts on health and the environment.

## **7. Experiences of citizens in Argentina living in close proximity to GM glyphosate-tolerant soybean plantations**

In Argentina, herbicide-tolerant GM crops are now grown on 23 700 million ha,<sup>xxi</sup> over half of the country's arable land. The rapid spread of GM soy plantations in particular, has displaced rural farm workers and peasant small holders, leading to a mass rural exodus into the nation's cities. Furthermore, because so much arable land has now been taken over by soy, other food items, such as vegetables, meat and milk, have become expensive luxuries. Thus, in a country famous for its agricultural produce, incidences of poverty and malnutrition have increased at an alarming pace.<sup>xxii</sup>

Serious damage to health has been recorded in Argentina among populations living in close proximity to GM herbicide-resistant soy plantations. In 2010 the provincial government of Chaco undertook a detailed study of health statistics for the town of La Leonesa. The results were startling: from 2000 to 2009 the childhood cancer rate tripled, and the rate of birth defects over the whole province increased nearly four-fold.<sup>xxiii</sup>

Another affected area is the Ituzaingó Annex, close to the city of Cordoba, Cordoba Province, which is surrounded by GM soybean crops. Communities there have been exposed to glyphosate aerial spraying for a number of years. The health risks posed to these communities include increased incidence of cancer, birth defects and spontaneous abortions. In 2011, 169 cases of cancer were recorded and 30 deaths from the disease, in addition to other pollution-related diseases such as lupus, skin, thyroid conditions and non-Hodgkin's lymphoma.<sup>14</sup> This is just one of the many areas affected by the spraying with glyphosate associated by GM soybean plantations. In fact, in Argentina, 30 per cent of the contamination occurs in peri-urban areas and 70 per cent in rural areas where there are several hundred small towns. The impact of the spraying has been so great it has resulted in the formation of groups such as 'Stop Spraying', the 'Teacher Struggle Front' and the 'People's Physician Network'.<sup>15</sup> These health problems will increase with the adoption of crops resistant to 2,4-D, as 2,4-D is

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[d\\_petition\\_to\\_parliament\\_2012.pdf](#)

<sup>13</sup> ACB. 2012. The New Generation of GM Herbicide Crops.

<sup>14</sup> For more information see <http://madresdeituzaingo.blogspot.com/>

<sup>15</sup> For more information see <http://www.reduas.fcm.unc.edu.ar/>

a much more toxic herbicide.

## **8. Human Rights requiring protection**

8.1 Mr. Grover, it is our respectful view that the introduction and consequent expansion of GM crops resistant to even more dangerous herbicides than glyphosate, will constitute a violation of our human rights as articulated in the Universal Declaration of Human Rights. Article 25 (1) states that 'Everyone has the right to a standard of living adequate for health' – a right that will be denied, especially to populations living in close proximity to such GM crops, those that will consume toxic residues of 2,4-D in the GM maize and soybeans and those that will consume the GM maize and soybeans, taking into account the risks the GMOs pose to human health.

8.2 Similar rights are articulated in Article 12 of the International Covenant on Economic, Social and Cultural Rights and Article 24 of the Convention on the Rights of the Child. Additional rights, such as the right to non-discrimination set out in article 5 (e) (iv) of the International Convention on the Elimination of All Forms of Racial Discrimination and in Article 12, paragraph 1, of the Convention on the Elimination of All Forms of Discrimination against Women are also at risk of violation.

8.3 The International Covenant on Economic, Social and Cultural Rights (ICESCR) points out in Article 12 (b), the need for the improvement of all aspects of environmental and industrial hygiene, as part of the right to health. On the other hand, the Constitution of the World Health Organization includes the enjoyment of the highest attainable standard of health as one of the fundamental rights of every human being without distinction of race, religion, political beliefs, economic or social condition. The Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (the 'Protocol of San Salvador') in its Article 10.1 on the right to health provides that 'Everyone shall have the right to health, understood to mean the enjoyment of the highest level of physical, mental and social well-being'.

8.4 We also recall the Human Rights Resolution 2005/24 on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. The Commission on Human Rights recognises that: the achievement of the highest attainable standard of physical and mental health is a most important worldwide social goal. The Commission also reaffirmed that the primary responsibility for promoting and protecting all human rights rests with the United States. The Human Rights Commission also affirmed that access to a sufficient amount of safe, clean water is fundamental to the realisation of the right of everyone to the enjoyment of the highest attainable standard of health.

8.5 The Special Rapporteur, Paul Hunt, in his report on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health<sup>16</sup> established that at the heart of the right to the highest attainable standard of health,

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<sup>16</sup> A/HRC/7/11. 31 January 2008. Promotion and Protection of All Human Rights, Civil, Political, Economic, Social and Cultural Rights. Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, Paul Hunt.

among other aspects, are the underlying determinants of health,<sup>17</sup> such as safe water, adequate sanitation and a safe environment.

8.6 We would also like to point out that the Precautionary Principle has been broadly recognised in the international environmental legislation,<sup>18</sup> which advocates taking precautionary action when chemicals pose possible threats to human health and the environment, rather than waiting for complete scientific proof of cause and effect. In this regard, we point to a preliminary recommendation of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, invoking the Precautionary Principle to prevent exposure of human population to aerial spraying with herbicides.<sup>19</sup>

## 9. Alternatives to GM based agriculture

9.1. In concluding, we respectfully draw your kind attention to the findings of the landmark UN-led study, the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), which is the most comprehensive review of global agriculture ever undertaken. Its findings were approved in 2008 by the overwhelming majority (95 per cent) of governments attending the final intergovernmental plenary in Johannesburg.

The IAASTD, which was sponsored by four United Nations agencies, the World Bank and the Global Environmental Facility, was a three-year study involving more than 400 experts from over 80 countries. In short, it is the most comprehensive assessment of global agriculture that has ever been undertaken.

9.2 In general, the IAASTD found little evidence to support a conclusion that modern biotechnologies are well suited to meeting the needs of small-scale and subsistence farmers, particularly under the increasingly unpredictable environmental and economic conditions that they face. It further found that 'modern biotechnology and

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<sup>17</sup> Paragraph 15.

<sup>18</sup> See for instances: World Charter for Nature 1982. (Principio 11.b). The Montreal Protocol on Substances that Deplete the Ozone Layer (Preamble). Agenda 21, 1992. (Par. 35.3). The Convention on Biological Diversity. 1992. (Preamble). Río Declaration on Environmental and Development, 1992. (Principle 15). Climate Change Framework Convention. 1992. (Article 3.3). Cartagena Protocol on Biosafety. For a full analysis of the Precautionary Principle see Cameron and Abouchar. 1991. The Precautionary Principle: A Fundamental Principle of Law and Policy for the Protection of the Global Environment. Boston College International and Comparative Law Review. Vol. 14. Issue 1. Article 2. Available at < <http://lawdigitalcommons.bc.edu/iclr/vol14/iss1/2/>>

<sup>19</sup> In a mission to Ecuador and Colombia, the Special Rapporteur, Paul Hunt's, preliminary view was that there was credible and reliable evidence that the aerial spraying of glyphosate along the border damages the physical and mental health of people living in Ecuador. In addition, the Special Rapporteur's preliminary conclusion was that the evidence provided during the mission was sufficient to call for the application of the precautionary principle and that accordingly, Colombia should not recommence aerial spraying in the 10-km border zone with Ecuador, thus ensuring conformity to its international human rights responsibilities. Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. Preliminary note on the mission to Ecuador and Colombia. Addendum. A/HRC/7/11/Add.3. 4 March 2007.

its products have not reliably increased yields of crops', that GM crops did not necessarily lead to reductions in pesticide use, and have, particularly in South America, "had a negative impact on biodiversity due to the conversion of forest areas and natural savannahs to transgenic plantations, in particular soybean". Where GM crops, agro-chemicals and mechanisation have been introduced, social cohesion has been affected, as these methods have primarily benefited the better-resourced groups in society and transnational corporations, rather than the most vulnerable ones.<sup>xxiv</sup>

9.3 The IAASDT called for a re-orientation of policy towards greater social equity and environmental sustainability, and made the following recommendations:

- Greater support for small-scale farmers', women's, indigenous and community-based organisations, and investment in rural areas;
- Ensure farmers have access to land, seeds, water information, credit and marketing infrastructure;
- Build capacity in participatory agro-ecological research, extension and education and in bio-diverse, ecologically resilient farming practices to cope with increasing environmental stress;
- Recognise the rights of farmers and independent researchers to save, exchange and cultivate seed;
- Greater regulation at the global, regional and local levels to prevent corporate concentration in the food and agricultural industries, and to ensure equitable access to food and decision-making mechanisms for all groups in society; and
- Referring specifically to GMOs, the IAASDT called for more transparency and public participation in biotechnology debates, long-term environmental and health monitoring assessment, greater use of the Precautionary Approach in decision-making, and limiting the cultivation of GM plants in regions where wild relatives occur.

9.4 The IAASDT's calls have been echoed more recently by the UN Special Rapporteur on the right to food, Olivier De Schutter. In a special report submitted to the UN General Assembly in late 2010, Mr de Schutter, in addition to the recommendations above, pointed out that agro-ecology, as well as resulting in more equitable social relations in rural areas, can lead to production increases, particularly for resource poor, small-scale farmers. Citing research by Jules Pretty et al., de Schutter pointed out that in 286 sustainable agricultural projects across 57 developing countries the average yield increase on farms where such projects had been carried out was 79 per cent. After the UN Conference on Trade and Development (UNCTAD) and UN Environment Programme (UNEP) reanalysed the data to look solely at African projects, they found even higher average yield increases: 116 per cent across Africa as a whole and 128 per cent increases for projects in East Africa.<sup>xv</sup>

## 10. Relief sought

Noting our deep concern that the commercialisation of GM maize and soybeans, genetically engineered to be resistant to the herbicide 2,4-D in countries such as Argentina, Brazil, South Africa and the US, will violate the right to health of millions of

people in these countries;

Nothing further that your mandate, Mr Special Rapporteur, is to ensure the realisation of the right of everyone to the enjoyment of the highest attainable standard of physical and mental health;

Recalling that the Commission on Human Rights requested you, Mr Special Rapporteur, to make recommendations on appropriate measures to promote and protect the realisation of the right of everyone to the enjoyment of the highest attainable standard of physical health;<sup>20</sup>

**We kindly request that you take the following actions:**

10.1. Request that the governments of Argentina, Brazil, South Africa and the United States conduct a comprehensive, independent and transparent environmental, socio-economic and food safety assessment of both the impacts of genetically modified (GM) crops engineered to be resistant to Dow Chemicals' herbicide, 2,4-D, and the impacts of a likely significant increase in use of 2,4-D as a direct consequence of introduction of these 2,4-D resistant crops, before any new approvals are granted for the commercial growing, importing or exporting of these crops and their products;

10.2. Recommend that such assessment be conducted by a multi-disciplinary team of experts, appointed by these governments, in consultation with the public in their respective countries in an open and transparent manner by way of public hearings;

10.3 Recommend to the governments of Argentina, Brazil, South Africa and the United States not to grant any new approvals with regard to the GM crops set out in Annex A hereto, until the assessments referred to in paragraph 2.1 above have been satisfactorily completed and the results made public, showing that such GM crops and the herbicides with which they are designed to be used will not undermine the right to health;

10.4 Request the government of South Africa to reverse its decision to grant the approval for the importation for food, feed and processing, of Dow Chemical's GM maize variety, DAS-40278-9 (also known as 2,4-D GM maize);

10.5 Recommend to the governments of Argentina, Brazil, South Africa and the US that they initiate a process of making reparations to those people who have already suffered impairment to their health and well-being, as a result of exposure to glyphosate-tolerant GM crops currently grown in these countries; and

10.6 Recommend to the governments of Argentina, Brazil, South Africa and the US to take immediate and appropriate measures to restore ecosystems that have been damaged or degraded as a result of the use of glyphosate in association with GM

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<sup>20</sup> Human Rights Resolution 2005/24. The right of everyone to the enjoyment of the highest attainable standard of physical and mental health. Requests to the Special Rapporteur.

herbicide-tolerant crops.

Signed

Mariam Mayet, African Centre for Biosafety and Carlos Vicente, GRAIN on behalf of the ACB, GRAIN and the other organisations and signatories.

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James, C (2012). **Global status of commercialised biotech / GM crops: 2011**. ISAAA Brief No.43. ISAAA: Ithaca, NY. <http://isaaa.org/resources/publications/briefs/43/default.asp>

ii Boyd, D (2006). **The Food we eat: An international comparison of pesticide regulations**. David Suzuki Foundation. <http://www.davidsuzuki.org/publications/downloads/2006/DSF-HEHC-Food1.pdf>

iii Bachand, N. & Gue, L (2011). **Pesticide Free? Oui!** 2011 progress report: A comparison of provincial cosmetic pesticide bans. **David Suzuki Foundation**. [http://www.davidsuzuki.org/publications/downloads/2011/Bilan\\_reglementations\\_pesticides\\_2011\\_EN\\_VF.pdf](http://www.davidsuzuki.org/publications/downloads/2011/Bilan_reglementations_pesticides_2011_EN_VF.pdf)

iv Bennet, B (2012). **Special committee on cosmetic pesticides**. Report submitted to legislative assembly of British Columbia. 17<sup>th</sup> May, 2012. <http://www.leg.bc.ca/cmt/39thparl/session-4/cp/reports/PDF/Rpt-CP-39-4-Report-2012-MAY-17.pdf>

v James, C. (2012). **Global status of commercialised biotech / GM crops: 2011**. ISAAA Brief No.43. ISAAA: Ithaca, NY. <http://isaaa.org/resources/publications/briefs/43/default.asp>

vi See [http://www.aphis.usda.gov/biotechnology/not\\_reg.html](http://www.aphis.usda.gov/biotechnology/not_reg.html)

vii The Department of Agriculture, Forestry and Fisheries' media statement 'on so-called agent orange maize', dated 26 July 2012, states this was approved in May 2012. However, this decision was not included in the GMO permit list published for May, but was included in the permit list for June (which was published on the DAFF's website in July). Thus, the public was not made aware of this decision for nearly 2 months.

viii Food standards Australia New Zealand (FSANZ) is a single governing body responsible for food standards, including the regulation of GMOs, in both countries.

ix **Dow AgroSciences petition (09-349-01p) for determination of non-regulated status of Event DAS-68416-4** [http://www.aphis.usda.gov/brs/aphisdocs/09\\_34901p\\_dea.pdf](http://www.aphis.usda.gov/brs/aphisdocs/09_34901p_dea.pdf)

x WHO (1987). **WHO IRAC monographs on the evaluation of carcinogenic risks to humans, volumes 1 to 42**. <http://monographs.iarc.fr/ENG/Monographs/suppl7/suppl7.pdf>.

xi See, for example: Hardell L, Eriksson M (1999). **A case-control study of non-Hodgkin lymphoma and exposure to pesticides**. *Cancer* 85:1353-1360; McDuffic HH, Pahwa P, McLaughlin JR, Spinelli JJ, Fincham S, Dosman JA, Robson D, Skinnider LF, Choi NW (2001). **Non-Hodgkin's lymphoma and specific pesticide exposures in men: Cross-Canada study of pesticides and**

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