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7  
8 **UNITED STATES DISTRICT COURT**  
9 **NORTHERN DISTRICT OF CALIFORNIA**  
10 **OAKLAND DIVISION**

11 **THE REPUBLIC OF THE MARSHALL ISLANDS,**

12 Plaintiff,

13 v.

14 **THE UNITED STATES OF AMERICA,**  
15 *et al.,*

16 Defendant. /

Case No. 4:14-cv-01885-JSW

**AMICUS CURIAE BRIEF OF  
PHYSICIANS FOR SOCIAL  
RESPONSIBILITY, INTERNATIONAL  
PHYSICIANS FOR THE PREVENTION  
OF NUCLEAR WAR, AND PAX  
CHRISTI INTERNATIONAL IN  
OPPOSITION TO MOTION TO  
DISMISS**

18  
19 Hearing Date: October 10, 2014  
Time: 9:00 A.M.  
20 (but related to a hearing on  
21 September 12, 2014 at 9:00 A.M.)  
22 Courtroom: Oakland Courthouse,  
23 Courtroom 5 - 2d Floor  
24 1301 Clay Street  
Oakland, CA 94612

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1 **SUMMARY**

2 Amici curiae file this brief to reveal the untruth in the government's arguments that (1)  
3 minimize the risk of injury created by the government's noncompliance with its obligations  
4 under the Non-Proliferation Treaty (NPT), (2) assert the government's *ipse dixit* that it  
5 complies with the NPT and so should not be disturbed, and (3) assert the lack of an issue of  
6 public interest. Not so.

7 As shown in Part I of this brief, the risk of nuclear war, either intentional or accidental,  
8 poses a substantial risk of injury sufficient to give plaintiff standing.

9 As shown in Part II of this brief, peer-reviewed scientific studies establish that if a  
10 regional nuclear war occurs involving 100 Hiroshima-sized bombs, the damage to the  
11 atmosphere, to agriculture, and to food production will put up to two billion innocent people  
12 far from the warring states at risk of famine and death by starvation.

13 As shown in Part III of this brief, the world's spiritual leaders, here represented by the  
14 Catholic Church, recognize that the refusal of the major nuclear powers, including the  
15 defendant, to fulfill their "good faith" obligation under the NPT to pursue nuclear  
16 disarmament violates the fundamental precepts that preserve the sanctity of human life and  
17 preserve security.

18 Accordingly, this Court should deny the government's motion to dismiss.

19 **INTRODUCTION**

20 Every man, woman and child lives under a nuclear sword of Damocles, hanging by  
21 the slenderest of threads, capable of being cut at any moment by accident or  
22 miscalculation or by madness. The weapons of war must be abolished before they  
23 abolish us.

24 Pres. John F. Kennedy.<sup>1</sup>

25 The Motion to Dismiss asserts technical defenses that rest on false assurances. These false  
26 assurances wrongly suggest that almost 45 years after the Non-Proliferation Treaty was  
27 created, the thousands of nuclear warheads that the major nuclear powers possess—and intend  
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<sup>1</sup> Speech to the United Nations General Assembly, Sept. 25, 1961.  
<http://www.state.gov/p/io/potusunga/207241.htm>.

1 to continue to possess—somehow show defendant's compliance with NPT obligations, pose  
2 no significant risk of injury to plaintiff, and raise no question of public interest. Not so.

3 1. The government claims that the plaintiff is exposed only to "a generalized and  
4 speculative fear of the potential danger of nuclear proliferation [that] does not constitute a  
5 concrete injury required to establish injury in fact." Mo. Dismiss 3:10-11. But this amicus  
6 brief will show that the injury to plaintiff from a nuclear catastrophe is a concrete injury—  
7 putting plaintiff's citizens at risk of famine—that is *not* speculative because, as Pres. Kennedy  
8 said, nuclear war could break out "*at any moment* by accident or miscalculation or by  
9 madness." (Emphasis added).

10 2. The government claims that granting plaintiff relief "would squarely contradict, and  
11 interfere with, the position of the United States that it is 'in compliance with all its obligations  
12 under arms control, nonproliferation, and disarmament agreements and commitments.'" Motion  
13 at 5:25-6:1. Apparently, simply because the government asserts it is in compliance,  
14 this Court is asked to accept—contrary to the historical record—that the government is in  
15 compliance. This amicus brief, urges this Court to determine for itself whether the  
16 government is "in compliance" (as claimed), or whether the government's claim of compliance  
is contradicted by the historical record.

17 3. The government claims "the issuance of declaratory (and associated injunctive) relief  
18 would be *contrary to the public interest*" because compliance issues will be the "subject of  
19 discussion" in 2015 at the U.N. Mo. Dismiss at 13:17-25. But what the NPT calls for is not  
20 merely discussion—the NPT parties have been "discussing" non-proliferation and nuclear  
21 disarmament for almost 45 years. What the NPT requires is *action*, and plaintiff deserves the  
22 opportunity to prove that defendant will take the required action *only in response to this*  
23 *Court's mandate*.

24 Therefore, the motion to dismiss should be denied.  
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**I.**

**The risk of nuclear catastrophe is substantial.**

**A. The risk of the injury that plaintiff sues to avoid is substantial.**

The answer to the government's attack on plaintiff's standing is that the risk of injury to which the defendant has exposed the plaintiff is substantial.

To minimize the plaintiff's risk of injury, the government asks this Court to turn a blind eye to history, which is littered with catastrophic occurrences that were foreseeable but were ignored, causing unacceptable fatalities. But here amici will show that on many occasions, nuclear states, including the defendant, created a substantial risk of intentional or accidental nuclear war. Although the NPT was created to eliminate this risk, still, some 45 years later, the defendant refuses to take the steps mandated by the NPT to eliminate this risk, thereby putting the entire world (including plaintiff) at risk.

A familiar historical analogy illustrates the point and shows why this Court should reject the government's argument minimizing the risk.

Before July 25, 2000, the Concorde airplane had flown for 27 years without a fatal mishap. Like the government here, before July 25, 2000, everyone associated with the Concorde would have regarded the risk of a fatal crash "speculative" and, like defendant's inaction with regard to nuclear risks, would have disregarded that risk. Yet on that day the plane caught fire and crashed, killing all 109 persons aboard. The crash resulted from a sequence of mishaps that were foreseeable and several of which had occurred several times before: (1) on the runway was debris that (2) hit the plane's tire, (3) causing the tire to blow out, (4) which caused the fuel tank to rupture, (5) which caused a fire (6) that caused a loss of control and the fatal crash.<sup>2</sup>

Before this crash, Air France (like defendant here) ignored substantial evidence of the serious risk of accidental catastrophe. Specifically, from 1979 to 1981, Concordes taking off in the U.S. suffered tire failures *on four occasions*. On one occasion, the tire ruptured three

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<sup>2</sup> [http://en.wikipedia.org/wiki/Air\\_France\\_Flight\\_4590](http://en.wikipedia.org/wiki/Air_France_Flight_4590)

1 fuel tanks and tore a hole in the wing. *Ibid.* Despite these "close calls," Air France, like the  
 2 government here, refused to act to avert the foreseeable risk killed everyone on board.

3 Similarly, so far there have been no failures of nuclear deterrence. But that good fortune  
 4 does not support the government's claim that injury to the Marshall Islands is "speculative," or  
 5 that the issue before the Court is not a matter "of public interest." As shown below, during  
 6 tense times and calm times, the catastrophic danger created by the government's  
 7 noncompliance with its NPT obligations creates a risk that violates the Treaty, as this Court  
 8 should declare.

9 **B. Avoiding nuclear war requires "perfection"—but “we are not perfect.”**

10 Refuting the government's claim that the risk of injury from nuclear catastrophe is merely  
 11 "potential" or "speculative," amici cite the admission of an American general that avoiding  
 12 accidental nuclear war requires "perfect" performance by military personnel and nuclear  
 13 weapons technology, but that such perfect performance is impossible. Specifically, in 2008  
 14 Gen. Kevin Chilton, commander of the United States Strategic Command (STRATCOM),  
 admitted:

15 We have a lot of balls we juggle every day in this command . . . . Most of them that we  
 16 drop, they're going to bounce. . . . But the nuclear missile is a crystal ball. We cannot  
 17 afford to drop that. This is a mission area where we as human beings are challenged to  
 be perfect. *We are not perfect.*<sup>3</sup>

18 It is this lack of perfection that puts plaintiff at risk and gives plaintiff standing.

19 **C. The Cuban Missile Crisis: The risk of nuclear war was "between one-out-of-**  
 20 **three and even," and accidents almost triggered nuclear war six times.**

21 **1. On the brink of nuclear war.**

22 The Cuban Missile Crisis showed that nuclear war could readily begin either intentionally  
 23 or by accident. Indeed the world came close to nuclear war *six times* because nations are  
 24 willing to engaged in intentional or unintentional provocations that foreseeably risked nuclear  
 25 catastrophe. As President Kennedy said, the risk of nuclear war during the Cuban Missile  
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27 <sup>3</sup> E. Scarry, *Thermonuclear Monarchy*, at 397 (2014)(emphasis added).  
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1 Crisis was “between one out of three and even.” Theodore C. Sorensen, *Kennedy*, p. 705  
2 (1965). The NPT obligates defendant to work in good faith to reduce this risk to zero.

3 **2. Six accidents almost triggered nuclear war.**

4 The Cuban Missile Crisis in October 1962 provides substantial evidence that states are  
5 "not perfect" in managing their nuclear arsenals and in preventing accidental nuclear war.

6 1. On October 27, 1962, nuclear war was almost triggered when an American U-2 over  
7 Cuba was shot down, killing the pilot.<sup>4</sup>

8 2. Nuclear war was almost triggered again on October 27, 1962, when the U.S. Navy  
9 dropped depth charges on a Soviet submarine at the blockade line. The U.S. Navy was  
10 unaware this submarine was armed with a 15-kiloton nuclear torpedo and had orders allowing  
11 use of the torpedo under certain conditions. The decision to launch these torpedoes required  
12 agreement from all three officers on board, but fortunately one of them objected and the  
13 launch was averted.<sup>5</sup>

14 3. Nuclear war was almost triggered again on October 27, 1962, when a U.S. U-2 spy  
15 plane made an accidental, unauthorized overflight of the Soviet Union’s far eastern coast. The  
16 Soviets responded by scrambling fighters, and the United States responded by launching  
17 fighters armed with nuclear air-to-air missiles over the Bering Sea.<sup>6</sup> Though authority to  
18 launch the nuclear air-to-air missiles rested with the military commander, actual control over  
19 the nuclear weapons depended on “the discipline of the individual pilots.” Scott D. Sagan, *The*  
20 *Limits of Safety*, at 137 (1993). Fortunately the U-2 pilot established visual contact with one  
21 of the U.S. planes and was escorted to a remote landing site on the coast. *Ibid.* at 137. This  
22 incident risked nuclear war either because the Soviets could attack or the American

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23 <sup>4</sup> M. Dobbs, *One Minute to Midnight: Kennedy, Khrushchev, and Castro on the Brink of*  
24 *Nuclear War*, pp. 241-242 (2008).

25 <sup>5</sup> *Ibid.*, pp. 303, 317.

26 <sup>6</sup> M. Dobbs, “Why We Should Still Study the Cuban Missile Crisis,” Special Report 205.  
27 United States Institute of Peace (<http://www.usip.org/files/resources/dr205.pdf>); S. Schoenherr,  
28 “The Thirteen Days, October 16-28, 1962” (<http://history.sandiego.edu/gen/filmnotes/thirteendays4.html>)

1 interceptors would engage the Soviet fighters and launch their nuclear air-to-air missiles. *Ibid.*  
2 at 142. A serious U.S. error was made when no order was given to terminate the air sampling  
3 flights until the crisis was over. The Air Force continued to undertake the U-2 flights during  
4 the missile crisis—even though on August 30, 1962, a U-2 plane conducting air sampling had  
5 already accidentally flown into the Soviet Union. *Ibid.* at 138.

6 4. Nuclear war was almost triggered on October 25, 1962, when an Air Force guard in  
7 Minnesota shot at what appeared to be a saboteur climbing the base security fence. The guard  
8 set off a sabotage alarm tied into the alarm systems at nearby bases, causing dozens of armed  
9 sabotage alert squads to be sent to patrol base perimeters. But at a Wisconsin base, the alarm  
10 system was faulty and, instead of triggering the sabotage alarm, ordered an immediate launch  
11 of nuclear-equipped aircraft. As pilots began to taxi down the runway, they believed a nuclear  
12 war had just started. S. Sagan, *The Limits of Safety* at 99 (1993). Fortunately, just before the  
13 planes took off, an officer who had learned no nuclear attack was underway drove onto the  
14 tarmac, signaling the aircraft to stop. *Id.* at 100.

15 5. Nuclear war was almost triggered by a false U.S. radar report of an attack by a missile  
16 from Cuba. On October 28, 1962, radar in New Jersey showed a missile launch from Cuba,  
17 reported to be over Florida with a predicted impact 18 miles west of Tampa in about two  
18 minutes. NORAD officers immediately passed this warning on to Strategic Air Command in  
19 Omaha. After the expected detonation failed to occur, the NORAD command center was told  
20 that a test tape had been inserted in the equipment, causing the test missile to be interpreted as  
21 real. *Ibid.* at 130-131.

22 6. Finally, nuclear war could have been triggered on October 26, 1962, by the regularly  
23 scheduled launch of an American test ICBM from Vandenberg Air Force Base in California.  
24 This launch created the risk that the Soviets might interpret this launch as a nuclear attack.  
25 Despite the severity of the Cuban missile crisis, the alert level, and the emergency operations  
26 taking place, this ICBM was launched without further orders from Washington. *Ibid.* at 79.  
27 Fortunately, the Soviets did not detect it.  
28

1 **D. Other episodes show the risk of nuclear war is substantial.**

2 **Intentional nuclear war.** The risk of intentional nuclear war is substantial because (as  
3 shown below) national leaders, including Presidents Truman, Eisenhower, Johnson, Nixon,  
4 and Ford, have all seriously considered using nuclear weapons. In this light, plaintiff is at risk  
5 from the possession of nuclear weapons, not only by defendant, but also by less stable  
6 signatories of the NPT.

7 **Pres. Truman.** In 1950, when North Korean forces were winning, Pres. Truman stated  
8 that any weapon in the U.S. arsenal might be used. In March 1951, he ordered that nuclear  
9 weapons be assembled on Okinawa, within range of North Korea. In April 1951, he  
10 authorized the use of nuclear weapons, with possible targets including Shanghai, Chinese  
11 industrial cities, and four North Korean cities.<sup>7</sup>

12 **Pres. Eisenhower.** On two occasions, Pres. Eisenhower contemplated using nuclear  
13 weapons—in Korean and in the Taiwan Straits crisis. “Thermonuclear Monarchy,” at 38-39,  
14 and fn. 4. During the Korean war, Pres. Eisenhower, at his first National Security Council  
15 meeting on February 11, 1953, discussed using nuclear weapons in the Kaesong area of North  
16 Korea.<sup>8</sup> On March 21, 1953, Eisenhower ordered the Pentagon to develop an offensive plan to  
17 move the line of conflict to the waistline of Korea. If the plan required atomic strikes against  
18 military targets, Eisenhower had no objections.<sup>9</sup> Further, in August 1953, Eisenhower  
19 dispatched 20 nuclear-armed B-36 bombers to Okinawa.<sup>10</sup> And in 1957, Eisenhower deployed  
20 nuclear-armed missiles, bombers, and fighter planes near the Korean demilitarized zone.  
21 These nuclear weapons remained there for 43 years.<sup>11</sup>

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22 <sup>7</sup> J. Gerson, *Empire and the Bomb*, at 82 (2007).

23 <sup>8</sup> Cameron Forbes, *The Korean War* (2012); Appu Soman, *Double-edged Sword: Nuclear  
24 Diplomacy in Unequal Conflicts: the United States and China, 1950-58* (2000).

25 <sup>9</sup>[http://www.theaustralian.com.au/news/features/korean-war-faced-atomic-bomb-  
26 conclusion/story-e6frg6z6-1225975201581?nk=f46684d30299760afd75d01f7e2  
27 def2b](http://www.theaustralian.com.au/news/features/korean-war-faced-atomic-bomb-conclusion/story-e6frg6z6-1225975201581?nk=f46684d30299760afd75d01f7e2def2b), quoting Forbes, *The Korean War* (2012).

28 <sup>10</sup> *Empire and the Bomb*, at 83.

<sup>11</sup> *Ibid.*

1 During the Taiwan Straits crisis over the islands Quemoy and Matsu, Pres. Eisenhower  
2 said on January 21, 1955, that he would do “*whatever had to be done* to protect the vital  
3 interests of the United States . . . even if his actions should be interpreted as acts of war.”  
4 “Thermonuclear Monarchy,” at 39 & fn. 5 (emphasis added). He stated at a March 16 press  
5 conference that he did not understand why nuclear weapons “shouldn’t be used just exactly as  
6 you would use a bullet or anything else.” “Empire and the Bomb” at 86-87. In late August,  
7 1955, Eisenhower sent the nuclear-armed Pacific Fleet to the Taiwan Strait, putting on alert  
8 over 200 nuclear-capable warplanes. Under instructions from Pres. Eisenhower, the Joint  
9 Chiefs publicly stated that the best hope for protecting the islands and Taiwan was to  
10 “counter-attack with atomic weapons.” *Id.* at 88.

11 **Pres. Lyndon Johnson.** Pres. Johnson contemplated a preemptive nuclear strike against  
12 China to prevent that country from developing nuclear weapons. Thermonuclear Monarchy, at  
13 16 and 410, fn. 20.

14 **Pres. Richard Nixon.** Pres. Nixon contemplated using nuclear weapons against North  
15 Vietnam. Thermonuclear Monarchy, at 16 and 410, fn. 20.

16 **Pres. Ford.** In 1976, a North Korean soldier’s murder of two U.S. soldiers at the DMZ  
17 caused Pres. Ford to activate U.S. nuclear forces, including a nuclear-armed aircraft carrier  
18 task force sent to Korean waters and nuclear-equipped B-52 bombers sent to fly near the  
19 DMZ.

20 This historical episodes (in addition to the Cuban Missile Crisis) prove the substantial risk  
21 that national leaders will, in a perceived crisis, contemplate using nuclear weapons.

22 **Mistaken nuclear war.** Threats generated by mistake or perceived by mistake through  
23 human or technical error have created a substantial risk of starting a nuclear war.

24 **The false NORAD warning.** On November 9, 1979, NORAD, SAC and the Pentagon  
25 were confronted with a realistic warning of a Soviet nuclear missile attack. Sagan at 228.  
26 NORAD alerted its entire air defense interceptor force, launched 10 interceptor aircraft, and  
27 launched the president’s special “doomsday plane.” Sagan at 229-230. Pres. Carter's national  
28 security advisor, Zbigniew Brezinski, was awakened at 3:00 a.m. to be told that *250 Soviet*

1 *missiles* were headed toward the United States. The President's decision time to order  
2 retaliation was three to seven minutes. When Brezinski sought confirmation, he was told  
3 *2,200 Soviet missiles* had been launched. But one minute before Brezinski intended to call the  
4 President, he was told that other warning systems did not confirm the earlier warnings.<sup>12</sup>

5 **The flawed computer chip warning.** On June 3, 1980, SAC command and the National  
6 Military Command Center received a false warning of an attack by Soviet submarine-launched  
7 ballistic missiles (SLBMs) and ICBMs. Sagan at 231. In response, B-52 and FB-111 bomber  
8 crews started their engines, minuteman Launch Control officers prepared for launch orders,  
9 and the Pacific Command's airborne Command Post was launched. Sagan at 231. A similar  
10 false warning had occurred three days later. Sagan at 232. These false warnings were caused  
11 by the failure of a 64-cent computer chip. Sagan at 232.

12 **The false Soviet early warning.** On September 26, 1983, the Soviet early warning system  
13 reported American intercontinental ballistic missiles (ICBMs) headed toward the U.S.S.R. A  
14 Soviet officer, Stanislav Petrov, was monitoring the early warning system to notify his  
15 superiors of any impending nuclear missile attack. If inbound missiles were detected, the  
16 Soviet strategy was an immediate nuclear counter-attack against the United States (launch on  
17 warning).

18 Shortly after midnight, the early warning computers reported that one intercontinental  
19 ballistic missile was headed toward the Soviet Union from the U.S. Fortunately, Petrov  
20 considered the warning to reflect a computer error. Later, the computers identified four  
21 additional missiles headed toward the Soviet Union. Again, Petrov correctly suspected a  
22 computer malfunction, although he had no other source of information to confirm his  
23 suspicions. In truth, these false alarms were caused by a rare alignment of sunlight on  
24 high-altitude clouds and the orbits of the detection satellites.

25 **Pres. Yeltsin received a false warning.** In January 1995, Russian radar misinterpreted a  
26 Norwegian scientific rocket as a U.S. submarine-launched ballistic missile. Pres. Boris Yeltsin

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27 <sup>12</sup> Robert M. Gates. From the Shadows: The Ultimate Insider's Story of Five Presidents and  
28 How they Won the Cold War (New York: Simon & Shuster, p. 114 (1996).

1 was presented with the “nuclear suitcase.” He had just a few minutes to decide whether to  
 2 launch a barrage of nuclear missiles. He decided the radar was in error.<sup>13</sup> In a second human  
 3 error, although the Norwegians had told Russia weeks earlier of the launch, the Russian early  
 4 warning radar crew had not been told.

## 5 II.

### 6 A Regional Nuclear War Will Put Two Billion People at Risk of Famine.

7 Dr. Ira Helfand<sup>14</sup> of Physicians for Social Responsibility has analyzed peer-reviewed  
 8 scientific studies of the effects of nuclear war on the atmosphere, climate, and agriculture to  
 9 demonstrate that a regional nuclear war between India and Pakistan would put two billion  
 10 people at risk of dying from starvation. See I. Helfand, Nuclear Famine: Two Billion People at  
 11 Risk (2013) ["Nuclear Famine"].<sup>15</sup>

#### 12 A. Regional nuclear war will reduce temperature and rainfall.

13 “Nuclear Famine” cited a 2007 study showing that a "limited" nuclear war involving 100  
 14 Hiroshima-sized bombs (less than 0.5% of the world's nuclear arsenal) would cause global  
 15 climate disruption.<sup>16</sup> In such a conflict, 6.6 Teragrams (Tg) [= 6.6 million metric tons]) of  
 16 black carbon aerosol particles would rise into the upper troposphere. The study used a NASA  
 17 climate model to find that 5 Tg of black carbon particles would cause a global average surface  
 18 cooling of -1.25°C that would persist for years, with the greatest cooling over land. This  
 19 cooling would reduce rainfall over major grain-growing regions in North American and  
 20 Eurasia. Nuclear Famine, at 4.

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21 <sup>13</sup> J. Cirincione, Nuclear Nightmares at 53 (2013);  
 22 [http://www.pbs.org/wgbh/pages/frontline/shows/russia/close call/](http://www.pbs.org/wgbh/pages/frontline/shows/russia/close%20call/).

23 <sup>14</sup> Dr. Ira Helfand is a member of the National Board of Physicians for Social Responsibility  
 24 and a Co-President of the International Physicians for the Prevention of Nuclear War. His  
 25 medical specialty is Emergency Medicine.

26 <sup>15</sup> <http://www.ippnw.org/pdf/nuclear-famine-two-billion-at-risk-2013.pdf>

27 <sup>16</sup> Robock, A., L. Oman, G. Stenchikov, O. Toon, C. Bardeen and R. Turco, Climatic  
 28 consequences of regional nuclear conflicts. *Atmospheric Chemistry & Physics*, 7:2003-12  
 (2007).

1 **B. Regional nuclear war will reduce food production.**

2 “Nuclear Famine” showed that food production would be significantly reduced by a  
3 regional nuclear war. “Nuclear Famine” cited a study of the impact on US corn and soybean  
4 production of a limited nuclear war in South Asia, based on the climate findings of Robock,  
5 et al. The conclusion was that production would decline 10%, with a downward spike in year  
6 five of 20%.<sup>17</sup> Nuclear Famine, at 7-8.

7 These findings are conservative for not considering adverse effects of (1) increased UV  
8 light secondary to ozone depletion, (2) daily temperature extremes that shorten the growing  
9 season, and (3) decreased petroleum supplies (vital to modern agricultural production) and  
10 higher petroleum prices. Nuclear Famine, 5-7.

11 “Nuclear Famine” also cited a study showing that a nuclear war-triggered 5 Tg event  
12 would cause reductions in rainfall, solar radiation, and temperature that would reduce Chinese  
13 middle season rice production.<sup>18</sup> The study showed a 21% yearly decline in Chinese middle  
14 season rice production in the first four years after nuclear war and 10% yearly decline for the  
15 next 6 years. Nuclear Famine at 8.

16 This study is also conservative for not considering adverse effects of UV light increases or  
17 daily temperature extremes or decline (and price increases) in petroleum products (fertilizer,  
18 pesticide, and gasoline).

19 “Nuclear Famine” also cited a 2013 study by Xia, Robock, Dr. Helfand, and others of the  
20 effect of post-nuclear war climate change on rice, maize, and wheat production in China. This  
21 study showed that winter wheat production would decline during the first year by over 50%,  
22 for the first five years by 39%, and for the full decade by 31%. For maize the average decline  
23 was 16% annually for a decade. Rice production would decline 20% for the first five years

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24 <sup>17</sup> Ozdogan, Mutlu, Alan Robock, and Christopher Kucharik, Impacts of Nuclear Conflict in  
25 South Asia on Crop Production in the Midwestern United States (2012), cited in Nuclear Famine  
26 at 8.

27 <sup>18</sup> Xia, Lili, and Alan Robock, Impacts of Nuclear Conflict in South Asia on Rice Production  
28 in Mainland China, Climatic Change (2012), cited in Nuclear Famine at 11.

1 and 17% for the entire decade. Nuclear Famine, at 9.<sup>19</sup>

2 **C. Regional nuclear war will put 2 billion people at risk of famine.**

3 The foregoing effects of nuclear explosions and fire on climate and agriculture would  
4 reduce food production, causing catastrophic famine for up to two billion people.

5 First, according to U.N. and U.S. officials, the current supply of food stocks will last  
6 between 68-77 days. Nuclear Famine, at 12.<sup>20</sup>

7 Further, the U.N. Food and Agriculture Organization estimates that the number of people  
8 already suffering from malnutrition is 870 million.<sup>21</sup>

9 In case of a South Asia nuclear war famine, these people would be priced out of the  
10 market because, even at baseline prices, they cannot afford to buy enough food. One study,  
11 using a recognized global economy model, found that if all global crops suffered the same  
12 yield declines predicted for maize and soybeans in the US corn belt, an additional 215 million  
13 people would become malnourished during the 10 years following the nuclear war.

14 Specifically, a 20% decline in crop yield would cause a 20% rise in food prices. Moreover,  
15 This study also showed that a rise in prices would cause a non-linear decrease in food  
16 accessibility, causing prices to spike further due to commodity speculation, hoarding, and  
17 increased private transactions. Nuclear Famine at 13-14.<sup>22</sup> Historical confirmation exists in the  
18 Japanese occupation of Burma, which reduced the amount of grain exported to Bengal. As a  
19 result, hoarding and five-fold price increases made rice unaffordable for those already at risk.  
20 Nuclear Famine, at 13-14.<sup>23</sup>

21 Nuclear war disruption of agriculture would threaten not only those who are  
22 malnourished, but also the hundreds of millions of people who depend on imported food from

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23 <sup>19</sup> Xia, L., Robock, A., Mills, M., Stenke, A, Helfand, I., “Global famine after a regional  
24 nuclear war,” submitted to *Earth’s Future* for publication October 2013.

25 <sup>20</sup> [www.fao.org/worldfoodsituation/wfs-home/csdb/en/](http://www.fao.org/worldfoodsituation/wfs-home/csdb/en/);  
26 [www.usda.gov/oce/commodity/wasde/latest.pdf](http://www.usda.gov/oce/commodity/wasde/latest.pdf).

27 <sup>21</sup> [www.fao.org/publications/sofi/en/](http://www.fao.org/publications/sofi/en/).

28 <sup>22</sup> [ippnw.org/pdf/projected-impacts-webb.pdf](http://ippnw.org/pdf/projected-impacts-webb.pdf);

<sup>23</sup> Sen, A., *Poverty and Famines* (1981).



1 nations that would no longer export food. Prior declines in food production show that leading  
2 food exporters simply suspend food exports—Canada in 2002 suspended wheat exports; the  
3 European Union and Russia in 2003 suspended wheat exports; Vietnam in 2004 suspended  
4 rice exports; India in 2007 suspended rice exports; Vietnam, Egypt and China in 2008  
5 restricted rice exports.<sup>24</sup> North African nations import over 45% of their food.<sup>25</sup> South Korea,  
6 Japan, and Taiwan import 50% of their grain. These nations would be devastated by the  
7 unavailability of grain imports. Nuclear Famine at 16.<sup>26</sup>

8 Finally, the effect on China of the food shortage caused by a regional South Asia nuclear  
9 war must be considered. Wheat accounts for 1/3 of Chinese grain consumption (125 million  
10 tons per year),<sup>27</sup> but a 31% shortfall in wheat production, coupled with a predicted 15%  
11 decline in rice production, would exhaust China’s reserves in two years. “Nuclear Famine,” at  
12 16. Moreover, maize production, essential as animal feed, would be reduced by 15%,  
13 according to the new study by Xia and Robock. These reductions in wheat, rice, and maize,  
14 would lead to a 10% decline in average caloric intake in China—but due to economic  
15 inequality, the impact of this decline would not be evenly distributed, threatening famine for a  
16 large percentage of the Chinese population. “Nuclear Famine” at 17.

17 Based on the foregoing analysis, PSR estimates that a regional nuclear war would put 2  
18 billion people at risk of famine. *Id.* The foregoing analysis supports the complaint’s reference  
19 in paragraph 11 to “nuclear famine.”  
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23 <sup>24</sup> Brown, LR., *Outgrowing the Earth*, WW Norton & Co. (2004);  
24 [www.businessweek.com/news/2010-10-04/medvedev-orders-review-of-russia-grain-export-bar-](http://www.businessweek.com/news/2010-10-04/medvedev-orders-review-of-russia-grain-export-bar-at-harvest-end.html)  
25 [at-harvest-end.html](http://www.businessweek.com/news/2010-10-04/medvedev-orders-review-of-russia-grain-export-bar-at-harvest-end.html).

26 <sup>25</sup> [www.ers.usda.gov/publications/gfa16/GFA16CountryTablesNAfrca.xls](http://www.ers.usda.gov/publications/gfa16/GFA16CountryTablesNAfrca.xls).

27 <sup>26</sup> [www.iucn.org/themes/wani/eatlas/html19.html](http://www.iucn.org/themes/wani/eatlas/html19.html).

28 <sup>27</sup> [http://www.daff.gov.au/\\_data/assets/pdf\\_file/0006/2259123/food-consumption-trends-in-](http://www.daff.gov.au/_data/assets/pdf_file/0006/2259123/food-consumption-trends-in-china-v2.pdf)  
china-v2.pdf.

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### III.

## The Catholic Church Supports Total Nuclear Disarmament.

The NPT's requirement of total nuclear disarmament is supported by the Catholic Church, and Catholic leaders identify defendant and other major nuclear states as failing to act in "good faith" to achieve nuclear disarmament. *E.g.*, Complaint, para. 83.

### A. The Catholic Church supports total nuclear disarmament.

Soon after the Cuban Missile Crisis, Pope John XXIII wrote in *Pacem in Terris* that "Nuclear weapons must be banned."<sup>28</sup> Vatican Council II (1962-1965) taught: "Any act of war aimed indiscriminately at the destruction of entire cities or other extensive areas along with their population is a crime against God and man himself. It merits unequivocal and unhesitating condemnation." Pastoral Constitution on the Church in the Modern World. (Part 80).<sup>29</sup> In 1982, Pope John Paul II said to the United Nations that "deterrence" was "morally acceptable" only "as a step on the way to progressive disarmament . . . ."<sup>30</sup>

Pope John Paul II told Pax Christi International in 1995: "it is to be hoped that *all countries will strive to implement this treaty [NPT] fully and effectively*, with a view to creating an international order guaranteeing security for all through the achievement of disarmament."<sup>31</sup>

In 1983 the U.S. Conference of Catholic Bishops released "The Challenge of Peace: God's Promise and Our Response," restating two basic principles of "just war" doctrine that bar nuclear weapons. The first principle is "proportionality," requiring "that the damage to be inflicted and the costs incurred by war *must be proportionate* to the good expected by taking

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<sup>28</sup> [http://www.vatican.va/holy\\_father/john\\_xxiii/encyclicals/documents/hf\\_j-xxiii\\_enc\\_11041963\\_pacem\\_en.html](http://www.vatican.va/holy_father/john_xxiii/encyclicals/documents/hf_j-xxiii_enc_11041963_pacem_en.html). (Para. 112.)

<sup>29</sup> [http://www.vatican.va/archive/hist\\_councils/ii\\_vatican\\_council/documents/vat-ii\\_cons\\_19651207\\_gaudium-et-spes\\_en.html](http://www.vatican.va/archive/hist_councils/ii_vatican_council/documents/vat-ii_cons_19651207_gaudium-et-spes_en.html).

<sup>30</sup> Pope John Paul II, Message to the General Assembly of the United Nations, June 7, 1982, No. 8.

<sup>31</sup> Pope John Paul II, address to Pax Christi International, May 29, 1995. [www.ewtn.com/library/PAPALDOC/J950529.HTM](http://www.ewtn.com/library/PAPALDOC/J950529.HTM) (emphasis added).

1 up arms.” (Para. 99.g (emphasis added).) The second principle is that weapons of war must  
 2 “discriminate” and not injure innocent civilians: “Any act of war aimed indiscriminately at  
 3 the destruction of entire cities or of extensive areas along with their population is a crime  
 4 against God and man himself. It merits unequivocal and unhesitating condemnation.” (Part  
 5 104.)<sup>32</sup>

6 **B. “Deterrence” is morally problematic given the inaction on nuclear disarmament.**

7 The doctrine of deterrence fostered by the major nuclear weapons states is increasingly  
 8 problematic, given the lack of progress toward total nuclear disarmament.

9 **The Holy See.** From 2010 to 2014, Archbishop Francis Chullikatt served as Permanent  
 10 Observer of the Holy See to the United Nations in New York. His address on the occasion of  
 11 the 2014 NPT PrepCom criticized the nuclear weapons states for their “unbalanced”  
 12 approach—enforcing the non-proliferation obligation of others, but neglecting their own  
 13 nuclear disarmament obligation.<sup>33</sup> The Archbishop stated the hope of the Holy See that “the  
 14 major states will take more substantial and resolute action to eliminate the scourge of these  
 15 morally unacceptable nuclear weapons that could indiscriminately annihilate non-combatants  
 and combatants alike in times of war as well as in times of peace.”<sup>34</sup>

16 **The U.S. Conference of Catholic Bishops.** In 1993, the U.S. Conference of Catholic  
 17 Bishops advocated total nuclear disarmament: “The eventual elimination of nuclear weapons  
 18 is more than a moral ideal; it should be a policy goal.” The Bishops expressed “skepticism”  
 19 over maintaining nuclear weapons for deterrence where deterrence provided an excuse for not  
 20 pursuing nuclear disarmament: “What previously had been defined as a safe and stable system  
 21 of deterrence is today viewed with political and moral skepticism” because deterrence does  
 22 not provide “the long-term basis for peace.” In sum, “Nuclear deterrence may be justified only

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 24 <sup>32</sup> <http://www.usccb.org/upload/challenge-peace-gods-promise-our-response-1983.pdf>

25 <sup>33</sup> Intervention of H.E. Archbishop Francis Chullikatt, Apostolic Nuncio, Permanent Observer  
 26 of the Holy See to the UN, NPT PrepCom, (30 April 2014, UN Headquarters, New York);  
<http://www.holyseemission.org/statements/statement.aspx?id=457> (¶¶ 3-5).

27 <sup>34</sup> *Id.* at ¶ 8.

1 as a step on the way toward progressive disarmament. . . .”<sup>35</sup>

2 **Douglas Roche.** Ambassador Roche has been an advisor to the Holy See Delegation at the  
 3 United Nations and Canadian Ambassador to the United Nations’ Disarmament Committee.  
 4 In 2013 he charged the major nuclear weapons states as having “consistently dodged any real  
 5 efforts for nuclear disarmament,” and using numerical reductions in arsenals to “mask[] their  
 6 continued modernization of warheads, delivery systems and infrastructure.” He cited criticism  
 7 that “the nuclear weapons powers, which continue to deploy new nuclear weapons and  
 8 delivery systems, ‘appear determined to retain their nuclear arsenals indefinitely.’” He charged  
 9 the NATO states with a “double standard” by reaffirming both “their commitment to the  
 10 Non-Proliferation Treaty goal of nuclear disarmament and their NATO dependence on nuclear  
 11 weapons. [¶] The policies are incoherent.” He noted that U.S. tactical weapons in Europe are  
 12 “a standing provocation to Russia, which is consequently disinclined to lower its own huge  
 13 numbers of tactical nuclear weapons. Russia is unlikely to give up its nuclear weapons while it  
 14 is virtually surrounded by an expanding NATO.”

#### 15 CONCLUSION

16 Contrary to the government's claims, plaintiff is presently at risk of a nuclear exchange  
 17 whose consequences will be catastrophic. This risk persists because the defendant has  
 18 neglected its nuclear disarmament obligations under the NPT. Hence, plaintiff has standing to  
 19 enforce the NPT bargain, and the motion to dismiss should be denied.

20 August 21, 2014

Respectfully submitted,

SMITH & MCGINTY

\_\_\_\_\_/s\_\_\_\_\_

DANIEL U. SMITH

Attorneys for Amici Curiae

PSR, IPPNW, and Pax Christi International

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26 <sup>35</sup> “The Harvest of Justice is Sown in Peace.”  
 27 <http://www.usccb.org/beliefs-and-teachings/what-we-believe/catholic-social-teaching/the-harvest-of-justice-is-sown-in-peace.cfm>.

**CERTIFICATE OF SERVICE**

I hereby certify that on August 21, 2014, I electronically filed the foregoing document with the Clerk of the Court, using the CM/ECF system, which will send notification of such filing to the counsel of record in this matter who are registered on the CM/ECF system.

Executed at San Francisco, California on August 21, 2014.

/s/

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Daniel U. Smith