ABSTRACT

Going by the environmental hazards the world is facing today, it can be said without doubt that harnessing nuclear energy is the need of the hour to tackle the dwindling energy sources. Atomic power has figured in discussions globally, been the reason behind protests and played evil in diplomatic talks between countries. Nuclear energy is, in many places, competitive with fossil fuels for electricity generation, despite relatively high capital costs and the need to internalize all waste disposal and decommissioning costs. If the social, health and environmental costs of fossil fuels are also taken into account, the economics of nuclear power are outstanding. But the ongoing debate, emanating from nuclear accidents, raises serious questions about its viability. The Chernobyl disaster, Three Mile Island accident and the recent Fukushima debacle have forced the protagonists to rethink. India has become the latest victim of the ‘nuclear-
controversy'. The Kundakulam and Jaitapur fiasco have put the people at loggerheads with the government with the latter genuinely being at a loss of words. The research paper shall deal with the raging altercation about the use of nuclear power and also critically examine the liability law enacted in India in 2010.

**Purpose** – The purpose of the research paper is to bring forth the dilemma that is being faced by the world regarding the use of nuclear power. The paper aims at chalking out the pros and cons of atomic energy, energy scenario in India, examine the liability law in force and also try to suggest the alternatives of the shortcomings in the law.

**Design/methodology/approach** – The research methodology is qualitative and descriptive in nature which basically explores the data drawn from secondary sources.

**Findings** – Nuclear power is actually helping in tackling the situation of dwindling energy sources in the environment. In developed countries atomic energy accounts for as a major source of energy after it is converted into electricity. But liabilities against nuclear accidents are not covered properly by law provisions of different countries. Even if there are provisions regarding nuclear liability, they may not suffice the situational crisis. India has the potential to grow into a nuclear power with objectives of expanding its energy domain.

**Research limitations/implications** – The paper stresses on secondary sources considering the fact that field work in the said sector is, to some extent, not feasible. The paper does not talk about statistics time and again but focuses on the theory for such data.

**Practical implications** – The research paper will assist in providing the readers with not a general view but an analytical view of the atomic energy scenario of the world.

**Originality/value** – The paper proves to be the one-stop source of information of nuclear energy and the legal provisions covering nuclear liability.

**Keywords** – Nuclear Energy, Civil Liability, Nuclear Accident.

**Paper type** - Research Paper
INTRODUCTION

The place of human kind is facing an array of problems. The problems have put the countries at each other’s throats when it comes to taking a major step in tackling that problem. One such problem which is being faced by majority of the countries is about the energy crisis situation which the world is anticipating at large.

The rate at which the non-renewable sources of energy are being depleted can be treated as a caution to the countries about the situation that can be averted if the world powers come together for a chalking out a possible solution.

One alternative that every country has looked for tackling the energy crisis situation is harnessing nuclear energy. But that alternative has its own share of pros and cons. The main apprehension which flows from using nuclear energy is the potential damage it might cause if there is any nuclear accident. The magnitude of damage a nuclear accident is capable of causing has already been manifested in the accidents of Three Mile Island, Chernobyl Disaster and the very recent Fukushima Daiichi disaster.

When it comes to analysing the advantages associated with it, nuclear power seems to be a viable option of being explored. Efficiency, capability of generating more energy from fewer resources and lesser environmental concerns surely make it the best alternative available considering the fact that nuclear energy is, in-fact, clean energy.

As far as India is concerned about its stand in nuclear power, it is very much committed to the harnessing of nuclear energy which is quite evident from the fact that near around 19 nuclear power stations are in operation. The Indo-US deal of 2008 and the subsequent passing of Civil Liability Bill in the year 2010 show India’s policy towards harnessing nuclear energy. A detailed analysis of the bill and its effects on the nuclear program in India has been dealt with in this research paper. Although concerns are there surrounding the nuclear plants in topical times as evident from the protests in Jaitapur and Kundakulam, but the measures adopted by government show that the India is adamant in not giving up nuclear energy as a possible source of harnessing energy.
The countries in and around the world have taken different standpoints regarding the use of nuclear power. The catastrophic disaster in Japan has shaken up the faith and belief of many countries. Countries like Germany have already announced the closure of nuclear plants by 2022. At the same time there are countries like China, that have been going on with the nuclear power as an alternative and viable source of energy production.

It should be agreed that although nuclear power has its own advantages, but on a wider perspective the potential damage it can cause cannot be overlooked. Securing future by putting present at risk cannot be an ideal way of saving the human civilization. However, if governments take proper care and avert possible disasters then nuclear energy is the best solution to the problem of energy crisis any day.

I. ENERGY SCENARIO- A PERSPECTIVE IN AND AROUND THE WORLD & INDIA’S CURRENT STAND

The energy scenario in and around around the world and particularly the use of nuclear energy shall give a clear perspective of the countries about their standpoints on this debatable topic.

The 68 operating reactors in France contribute a total of 63,130 Mwe which is approximately about 75% of the total electricity generated in the country.\(^1\)

Energy scenario in India.

It has already been seen that at present India is operating nineteen nuclear reactors in and around different parts of the country. This is an evidence to the fact with which India is fast progressing to the securing the avoidance of a situation of energy crisis in the future.

The current energy scenario in India can be looked at from the following statistics.\(^2\)

- Commercial sources of energy make up 50% of total consumption. Rest half is consumed from the non-commercial sources like fuel-wood and fossil fuels.
- More than 60% of the Indian households are dependent on traditional sources of energy.

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\(^2\)http://indiastatistical.wordpress.com/2006/10/03/indian-energy-scenario/, August 2012
• Experts predict that current rate of consumption of coal would make the valuable source of energy last for not more than 130 years.
• In commercial sector coal constitutes 29% of consumption, oil and gas 54% and electricity 17%.
• Hydro potential energy is used at around 20% of its total potential.
• 65% of rural energy sector needs are met by fuel woods. At this rate in near future availability of fuel food would be a greater constraint than food grains.
• As far as wind energy sector goes India is the second largest exploiter of wind energy generating near around 1000 MW on a yearly basis. This is more so because of the private involvement in the sector.

However energy consumption at this ratio is also not enough to meet the energy needs in the country. In the year 2009 the power deficit around the country was near around 9.8%. At present 80% of the energy is produced from thermal reserves but that is also dwindling because of the availability as well as environmental issues. This is why nuclear power has been seen as an alternative to curb the energy deficiency.

Currently India’s nuclear power capacity is 4120 MW which is near around 2.8% of the total power capacity. India is aiming to double the capacity in the next five years to 5%.

A. Present Nuclear Set-Up in India

At present there are 19 reactors generating 4120 MW of energy. This includes 160 MW each in Maharashtra TAPS-1 and 2 at Tarapur and fifteen PWHR. At Rawatbhata there is generation are plants with capacity of 100 MW, 220 MW, and 200 MW. The nuclear reactors at Kaiga and Kakrapar make up for the rest of the reactors and their production. The proposed nuclear power generation projects can be categorised as follows:

✓ Six units of 700 mw each, indigenous pressurised heavy water reactors (PHWRs) including 4 units at Kumharia in Haryana and 2 units at Bargi in Madhya Pradesh.
✓ Four units of 1000 mw each of light water reactors (LWRs) based on international co-operative Kundakulam in Tamil Nadu.

Six units of 1000 mw each of light water reactors (LWRs) based on international co-operation at Chhayamithi Virdi in Gujarat.

Six units of 1000 mwe each of light water reactors (LWRs) based on international co-operational at Kovvada in Andhra Pradesh.

The government proposition can well be manifested through the following table:

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>PROJECT NAME</th>
<th>INSTALLED CAPACITY IN MWe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kakrapar 3 &amp; 4</td>
<td>1400</td>
</tr>
<tr>
<td>2</td>
<td>Rawatbaha 7 &amp; 8</td>
<td>1400</td>
</tr>
<tr>
<td>3</td>
<td>Kundakulam 3 &amp; 4</td>
<td>2000</td>
</tr>
<tr>
<td>4</td>
<td>Jaitapur 1 &amp; 2</td>
<td>3300</td>
</tr>
<tr>
<td>5</td>
<td>FBR</td>
<td>1000</td>
</tr>
<tr>
<td>6</td>
<td>Saurashtra</td>
<td>2000</td>
</tr>
<tr>
<td>7</td>
<td>Kovvada</td>
<td>2000</td>
</tr>
</tbody>
</table>

Although projects are being undertaken at a fast pace but the 17th EPS report shows that India has been facing shortages. The report has considered electricity for all by 2012.

This is the current energy scenario in India and the plans that has been plans that government aims to undertake to boost up the nuclear power production to avoid an adverse situation of energy crisis.

However current situations in India regarding the protests shall give a better idea about the situation that India is currently facing in harnessing nuclear energy. The recent protests of Koondakualm & Jaitapur manifest the conflicts of nuclear energy in India. The reasons of conflict and the possible solutions brings out the dilemma that is being currently faced.

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4 http://www.assocham.org/events/recent/event_387/Lnt_perspective_on_Nuclear_power.pdf August 2012
1. **Kundakulam Nuclear Power Plant**

It is famously said: “In public domain, truth is not the truth, perception is the truth”. This adage could be related to the discourse on the Kundankulam Nuclear Power Plant (KKNPP). While the arguments in favour of the plant is that it will generate electric power essential for ‘development’, People’s Movement Against Nuclear Energy (PMANE) say that the plant will be ‘destructive’ to the life and livelihood of the Project Affected People (PAP).  

Before we go onto have a detailed analysis of the ongoing debate over KNNP we need to have a look at the history which led to the development of the power plant.

Located in the Tirunelvelvi District of southern Indian state Tamil Nadu, an inter-governmental agreement was signed on November 20, 1988 by then Prime Minister, Rajiv Gandhi and Soviet President Mikhail Gorabchev for the construction of two reactors. The project was set aside due to the break-up of Soviet Russia and also US’s opposition to as the agreement was violating the terms of Nuclear Suppliers Group. However a small port became operational in 2004 which was basically for the receiving of small barges for light water equipment. In 2008 four additional nuclear reactors were decided to set up which were expected to generate electricity of 1.2 GW.

The reason for this power plant in news of late is because of the mass agitation that has been launched against the power plant by the local masses.

There can be many reasons which can be attributed to the opposition to KNPP. Social activists played a very active role since the inception to make aware of the cons that this project might have had. The most interesting fact is that people at the beginning were very optimistic about it as hopes of economic development and prosperity were given. But the recent nuclear disasters actually catapulted the people to take serious note of the nuclear accidents all around the world. Some of the main reasons why Koondakulam power plant is not desirable and the reasons for which people are protesting can be categorized as follows:-

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➢ The detailed information about the nuclear power plant is not being issued. The Environment Impact Assessment report has not been made public and no hearing has been conducted regarding the first two reactors.

➢ The PWD of Tamil Nadu Government has declared that an area of 2-5 Km within the nuclear power plant would be declared as sterilisation zone which would automatically result in the displacement of the people inhabiting that area. However KNPP authorities claim that there would be no such scenario. Thus his double standard maintained by the government and the authorities create apprehension and fears in the mind of people.

➢ It is estimated that near around 1 million people live within 30 Km radius of the plant which far exceeds the Atomic Energy Regulatory Board stipulations and guidelines. In case of any disaster it would be a huge problem in evacuating this number of people without any prior precautions.

➢ Every project of economic development comes at the cost of environmental violation. The waste from the power plant if not treated properly shall be dumped in to the sea which shall affect the fish and marine life. It shall affect the food security of the entire Southern Tamil Nadu and Southern Kerala.

➢ Time and again assurance has been given that there would be no natural disasters in the region. But going by the history it does not seem so. There was a mild tremor in the surrounding areas of Koondakulam on March 19, 2006. The tsunami did hit the KNPP installations in 2004. Thus surety cannot be given that it would not happen again.

➢ The biggest contention is about who shall be liable in case of any disaster. History is a testimony to the fact that after disasters parties start playing blame game and making some irrelevant people scapegoats to save the face of many. Ultimately the sufferers are the common people. Under the Inter Governmental Agreement Russia insists that the agreement precedes the liability law and puts the whole responsibility on the NPCIL.

➢ The lacklustre attitude of the Indian Government about maintain high level secrecy, not giving pertinent information to the people creates more apprehension in the minds of the people. It is difficult to comprehend whether the power plants are for the benefit of people or for the profit motive of Russian and American Governments.
The Expert Committee on Peoples’ Movement Against Nuclear Energy which is spearheading the movement against Kundakulam plant published its report on 15 December, 2011 with the following concerns:

(i) Presence of volcanism at the site in the past and neighbourhood in the form of Carbonatite and basalt dyke swarms which were not mentioned in the site related documents circulated in the public domain.

(ii) Four instances of small volume volcanic eruptions since 1998 within 75 Kms of KNPP indicative of reactivation of tectonism. Evidence of mantle upwelling and crustal thinning in the land around the reactor campus and also in the Gulf of Mannar.

(iv) Karst formation during the last three years at three locations of Maruthankulam, Radhapuram and Pannayarkulam within 25 Kms of KNPP.

(v) The AERB guidelines are not being followed which says that campus reserve of 60000 cubic metres and two pipelines for drawing fresh water from Pecharai and Upper kothaiyar reservoirs while there is a campus reserve of 10000 cubic metres of fresh water sufficient to run two reactors.

These reasons have well caused a stir in the public and led to protests in the recent times. Government has taken steps to pacify people but there has been some lack of communication between the two sides resulting in sort of a deadlock not ready to be resolved

2. Jaitapur Power Plant

Another protest revolving around nuclear power plant in India is the Jaitapur Power Plant in Maharashtra. It is a proposed 9900 MW project of NPCIL at Madban village in Ratnagiir district, Maharashtra. If completed it would be the largest nuclear power generating station in the world by electrical power rating.

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The collaboration is between French company Areva and NPCIL, the deal worth being 9.3 billion. But there is a certain amount of controversy surrounding the plant which has led to the deadlock between the people and the authorities.

The first controversy is regarding the area which has been selected for the plant. The land is intended to be a seismic zone. This has been confirmed under RTI, 2005. The National Disaster Management Authority also places Ratnagiri as a seismic zone being classified under type IV category out of V. Documents reveal that the area already experienced two earthquakes of around 6.3 richter scale in 1985 and 2005.

The village is home to around 5000 fisher folk. The main concern is that once this plant comes up near around 5200 litres of water will be used for cooling and along with that marine life will also be affected. It is estimated that 30% of fish life will be destroyed just by the intake of water by the plant. Adverse circumstances may force the fishes to go deep in water and hence affect the life of fisherman. If looked from a bigger perspective economy in an indirect way shall be affected. India export fishes to other countries. In cases as these exports will be seriously hampered having a direct impact upon the balance of trade.

Konkan is called the “Kashmir of Maharashtra.” It is one of the biodiversity hot spots ranging from a varied amount of flora and fauna. With lush green vegetation, Konkan boasts of eco system which is rich in diversity and varied in housing flora and fauna. As stated above Konkan falls in the region of type IV seismic zone category. It is not clear whether the authorities have taken these things in to considerations or not. Construction of the plant would destroy the flora and fauna of the plateau.

There are also genuine concerns about the safety and security of the plant.

But the main concern is about the damage this project might cause to ecological system on the whole. According to Maharashtra Michhimar Kruti Samiti, seven of the region’s largest fishing
communities might be wiped off. If the project comes up the future of the fishermen in the region shall be endangered.

Konkan is one of the world’s 10 “Hottest Biodiversity Hotspots”. The Sahyadri mountains in the Western Ghats are home to over 5,000 species of flowering plants, 139 mammal species and 508 bird and 179 amphibian species, including 325 globally threatened ones. Two great peninsular rivers (the Krishna and the Godavari) originate there. The region’s ecology is so precious and unique that one would need a diabolically destructive imagination and intent to destroy it by building a nuclear power plant in it.

Government response to the public crisis at the initial stages was totally aggressive with activists and common people being put behind bars for agitation.

The concerns of the people were not looked at. Committees formed and commissions set up to pacify the people failed miserably because the root problems of the people were not addressed. Initially MoEF protested because the project violated environmental norms but after it got operational clearance, the fears of people were still not put to rest. Thus protests intensified.

Currently works in Jaitapur are at hold over environmental and security concerns.

Briefly analyzing these two crises it would be seen that the main reason of the contention to some extent is lack of communication between the government and the agitating people. Though the government set up commissions but somewhere the attempt to strike a chord was lacking in both the cases. It can’t be denied that the fears of the people are not without reason and hence it is up to the government to pacify these fears.

The fears which are seen in the minds of the people are because of various accidents which the world has witnessed at various times. The accidents have been discussed below:

**II. MAJOR NUCLEAR DISASTERS AND ITS IMPLICATIONS**

**A. Three Mile Island Accident**

The *Three Mile Island accident* was a partial nuclear meltdown which occurred at the Three Mile Island power plant in Dauphin County, Pennsylvania, United States on March
28, 1979. It was the worst accident in US commercial nuclear power plant history,\(^{[1]}\) and resulted in the release of small amounts of radioactive gases and radioactive iodine into the environment.\(^{[4]}\) The TMI plant operator and its insurers paid at least $82 million in publicly documented compensation to residents for "loss of business revenue, evacuation expenses and health claims".\(^{[5]}\) Also, hundreds of out-of-court settlements have been reached with alleged victims of the fallout, with a total of $15m paid out to parents of children born with birth defects. It was a major cause of the decline in nuclear construction through the 1980s and 1990s. The incident was rated a five on the seven-point International Nuclear Event Scale: Accident With Wider Consequences.

**B. Chernobyl Disaster**

The explosion on 26 April 1986 at the Chernobyl nuclear power plant, which is located 100 km from Kiev in Ukraine (at that time part of the USSR), and the consequent reactor fire, which lasted for 10 days, resulted in an unprecedented release of radioactive material from a nuclear reactor and adverse consequences for the public and the environment. The resulting contamination of the environment with radioactive material caused the evacuation of more than 100 000 people from the affected region during 1986 and the relocation, after 1986, of another 200 000 people from Belarus, the Russian Federation and Ukraine. Some five million people continue to live in areas contaminated by the accident.\(^{[16]}\) It is widely considered to have been the worst nuclear power plant accident in history, and is one of only two classified as a level 7 event on the International Nuclear Event Scale (the other being the Fukushima Daiichi nuclear disaster in 2011).\(^{[17]}\)

C. Fukushima Daiichi

The Fukushima Daiichi nuclear disaster is a series of equipment failures, nuclear meltdowns, and releases of radioactive materials at the Fukushima I Nuclear Power Plant, following the Tōhoku earthquake and tsunami on 11 March 2011. It is the largest nuclear disaster since the Chernobyl disaster of 1986. There were no immediate deaths due to direct radiation exposures, but at least six workers have exceeded lifetime legal limits for radiation and more than 300 have received significant radiation doses. Many Experts have termed the Fukushima Daiichi as a “Man-Made Disaster” rather than an Accident due to Natural Calamity because of poor handling of the disaster and large communication gaps between the rescue workers and Government Officials.

III. INDO-US NUCLEAR DEAL

The 123 Agreement signed between the United States of America and the Republic of India is known as the “US-India Civil Nuclear Agreement” or “Indo-US nuclear deal”. The framework for this agreement was a July 18, 2005, joint statement by Indian Prime Minister Manmohan Singh and then US President George W. Bush, under which India agreed to separate its civil and military nuclear facilities and to place all its civil nuclear facilities under International Atomic Energy Agency (IAEA) safeguards and, in exchange, the United States agreed to work toward full civil nuclear cooperation with India. The main purpose of the 2008 agreement for cooperation between the government of The United States Of America and The Government of India was concerning peaceful use of Nuclear Energy (123 Agreement) with a clear purpose to “Enable full civil Nuclear Energy Cooperation between the Parties.”

The Fact that India’s refusal to sign NPT and CTBT remained an irritant in Bilateral ties between India and US.A.

18 TEPCO (10 August 2011) “Chronology of Events at Fukushima Daiichi Nuclear Power Station”.
21 Office of the Press Secretary (June 18, 2005). "Joint Statement Between President George W. Bush and Prime Minister Manmohan Singh"
The 123 Agreement was signed between India and USA in the backdrop of India’s growing demand for Energy Supplies and to secure its high rate of Economic Growth.\footnote{Jayshree Bajoria and Esther Pan(2009), “The US.-India Nuclear Deal Backgrounder” Council on Foreign Relations, November 20, 2009, at http://www.cfr.org/publication/9663.html usindia_nuclear_deal.html.}

The 123 between India and USA put an end to technology denial regimes against India that have been in place for Three Decades and hence Ended India’s Nuclear Isolation.


An enabling legislation, called the Hyde Act, was passed in the US Congress in December, 2006, to enable the US Government to cooperate with India. The Hyde Act is only a US law. It is not binding on India.

US Congress made an exception to the Atomic Energy Act of 1954(AEA) regarding sec 123(a)(2) of AEA to include India within the ambit of its internal laws.\footnote{Rama Lakshmi And Steven Musfon,(2010), “US-India Reach Agreement on Nuclear Fuel Reprocessing” The Washington Post, March 30, 2010}

**A. Main Features of “123” Agreement**

1. The Agreement places India in a special category as a “State possessing advanced nuclear technology”, like the United States, with both parties “having the same benefits and advantages”.
2. The Agreement provides for full civil nuclear energy cooperation covering nuclear reactors and aspects of the associated nuclear fuel cycle including enrichment and reprocessing.
3. The Agreement provides for nuclear trade, transfer of nuclear material, equipment, components, and related technologies and for cooperation in nuclear fuel cycle activities.
4. The Agreement provides for the development of a strategic reserve of nuclear fuel to guard against any disruption of supply over the lifetime of India’s reactors.
5. The Agreement grants prior consent to reprocess nuclear material, transfer nuclear material and its products. To bring this into effect, India will establish a national reprocessing facility to reprocess safeguarded nuclear material. Consultations on arrangements and procedures will begin within six months of a request by either party and will be concluded within one year.

6. The 123 Agreement does not affect India’s right to conduct Nuclear tests in any manner.

IV. INTERNATIONAL NUCLEAR LIABILITY DAMAGE COMPENSATION REGIME

The basic principle of international nuclear law can be succinctly reduced to the following channeling liability exclusively to the operator of the nuclear installation, limiting the liability (amount, duration, and damage type) of nuclear operators, requiring the operator to have insurance, imposing strict liability upon the operator, and granting exclusive jurisdiction to the court of one country for a given nuclear incident or accident.


The convention on third Party Liability in the field of Nuclear Energy most commonly known as the Paris Convention, was one of the 1st Nuclear Conventions that dealt with liability issues in a post-nuclear weapons world held on July 29, 1960.

The convention covers damage or loss of life of any person or property by a nuclear incident in a nuclear installation or by substances from such installations.

The Paris Convention was the 1st International Treaty to introduce this concept of Channelling Liability to the Nuclear Operator.

The Principle had two Major Implications-

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1-Only the Nuclear Operator can be held liable for any Nuclear accident that fell under its purview.

2-Only the operator can be liable-meaning the operator cannot seek financial recourse through Third Party Lawsuits, indemnity action or by legal means.

**B. Vienna Convention on Civil Liability for Nuclear Damage**

The Vienna Convention on Civil Liability for Nuclear Damage of 1963 is very similar to the Paris Convention.

The Vienna Convention defines damage as a loss of life, “any personal injury or any loss of, or damage to property from a nuclear incident, or damage arising from the incident”

In addition, like the Paris Convention, the Vienna Convention has an “Armed Conflict” exception, and requires that operator be insured. However the Vienna Convention does not limit damage to that caused within the territory of the installation state. The Vienna Convention limits plaintiff’s ability to raise a claim to within ten years of the incident. Civil Liability is restricted to the single Operator entity who, in turn, cannot seek financial recourse elsewhere.

Unfortunately the Vienna Convention maintains the exclusive and strict liability of the Nuclear Operators and it maintains jurisdiction primarily in the country of occurrence or installation.

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29 Supra note 26.
C. Convention on Supplementary Compensation for Nuclear Damage

In 1997, the Convention on Supplementary Compensation for Nuclear Damage (CSC) was created as a means for a Supplementary Compensation fund to be available to the Signatories of the accord. The Fund is collectively provided by contributions from State parties. The installation States shall ensure the availability of at least 300 million SDR’s. The CSC is not yet in force because it must have at least five states that have ratified it with a minimum capacity of 400 GW installed. At the same time, very few states have signed the CSC for a variety of reasons, the primary being unwillingness, “to give up state sovereignty on the issue of nuclear liability.”

V. CIVIL LIABILITY FOR NUCLEAR DAMAGES ACT, 2010

The oil spill in the Gulf of Mexico and the Bhopal tragedy have brought back into focus the issue of industrial accidents, contractual liabilities and questions of operator liability. The Bhopal Gas Tragedy has engaged the Indian Government and Courts for over twenty six years and yet a solution acceptable to victims and other stakeholders is proving to be elusive. There was a requirement to have a legal regime to compensate for damage and losses arising from nuclear accidents in India since it had been planning a nuclear expansion in the energy sector and becoming a superpower. Further, the Indian nuclear industry is now expected to grow several fold from the present 4,120 Mw, with a fleet of indigenous reactors and those built with international assistance. Such a large nuclear programme warrants legislation to cover all aspects of civil liability, including possible trans-boundary damage. In the absence of a civil liability

35 International Atomic Energy Agency, Convention on Supplementary Compensation for Nuclear Damage, INFCIRC/567
36 Ibid.
37 Supra note 26.
40 Manoj Kumar & Lydia Powell (2010), “Civil Liabilities for Nuclear Damages Bill 2010 - The Way Forward”, Observer research Foundation Issue Brief No. 24, August 2010, pp.1, at: www.orfonline.org; Observer Research Foundation is a public policy think-tank that aims to influence formulation of policies for building a strong and prosperous India.
law, it would be difficult for India to add a large number of reactors as planned, and each reactor would have to be fully indemnified by the government.\textsuperscript{41} The legal basis for the use of nuclear energy is to be found in the “Atomic Energy Act, 1962”\textsuperscript{42} and a number of further regulations or supplementary rules.\textsuperscript{43} Before 2010 neither the Indian Atomic Energy Act, 1962 nor the Environmental Protection Public Liability Insurance Act, 1991\textsuperscript{44} had jurisdiction over accidents due to radioactivity. Instead, general non-contractual liability law (tort law, common law) was applicable. Therefore introduction of a nuclear liability act in the national scene was the crying need of the hour.

The bill, which provides for compensation in the event of a nuclear mishap and the modalities involved, was slated to be introduced in lower house of the Parliament on March 15, 2010 but the government decided against it at the last moment in view of stiff opposition.\textsuperscript{45} The Lok Sabha\textsuperscript{46}, after much debate, forwarded it to the Rajya Sabha which passed the Civil Nuclear Liability Bill on August 30, 2010 and thus the parliament adopted it.\textsuperscript{47} Initiating the debate in the Rajya Sabha, Mr Arun Jaitley was reported as saying that when India entered the market to purchase 40 nuclear reactors the character of the market would change. “It will no longer be a seller's market,” Mr Jaitley said.\textsuperscript{48} The Civil Liability for Nuclear Damage Bill having been passed by both the Houses of Parliament received the assent of the President on September 21, 2010.\textsuperscript{49} The Act then came into force from 11 November 2011.\textsuperscript{50} The Nuclear Liability Act

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\footnote{Bharadwaj, Anshu, Why, how and how much?, April 22, 2010, accessed from http://www.business-standard.com/india/printpage.php?autono=392670&tp=; liability provisions should be revised periodically to ensure they are adequate and aligned with international practice.}


\footnote{A regularly supplemented list of the legislation is available on the website of the Department of Atomic Energy, Government of India, at: http://www.dae.gov.in/rules/actindex.htm.}

\footnote{The Public Liability Insurance Act (1991), which provides immediate relief to persons affected by accident “occurring while handling any hazardous substance and for matters connected therewith or incidental thereto,” specifically excludes all nuclear – including radiological – accidents.}

\footnote{“Menon Briefs Cong Leaders on Benefits of Nuke Liability Bill”, www.outlookindia.com, New Delhi, March 16, 2010.}

\footnote{The Lok Sabha, also known as the House of the People, is the lower house of the Indian Parliament, and is where all the representatives are elected by direct vote (analogous to the US. House of Representatives). LOK SABHA, at: http://loksabha.nic.in/ (last visited August 20, 2012).}

\footnote{Parliament Adopts Nuclear Liability Bill,” The Hindu, 31 August 2010.}

\footnote{“Rajya Sabha clears nuclear liability Bill” The Hindu – Business Line, This article was published in the Business Line print edition dated August 31, 2010.}

\footnote{Act 38 of 2010.}

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consists of 7 Chapters with in total 49 Sections:- Chapter I: Preliminary (Sections 1-2), Chapter II: Liability for Nuclear Damage (Sections 3-8), Chapter III: Claims Commissioner (Sections 9-12), Chapter IV: Claims and Awards (Sections 13-18), Chapter V: Nuclear Damage Claims Commission (Sections 19-38), Chapter VI: Offences and Penalties (Sections 39-42), Chapter VII: Miscellaneous (Sections 43-49).

A. Purpose of the Bill

The main proponents of the Bill advocate that the Bill will strengthen India’s development on four fronts:\n1. it will increase India’s ability to produce energy and electricity
2. it will develop India’s defence technology
3. it will allow for advancements in India’s space program
4. it will stimulate global interest and investment in India.

“28 out of 30 countries which produce nuclear power have a Civil Nuclear Liability Regime, which defines clearly the responsibility of each actor – the operators, the vendors, the sellers, the designers, consumers and the Government. Only two countries - India and Pakistan - did not have a Civil Liability for Nuclear Damage Law. The role of each actor in the nuclear energy production programme has to be codified and responsibility has to be fixed on each of them. This is precisely what this Bill seeks to achieve.”

The main objective of the bill is to provide for prompt compensation to the victims in case of a nuclear accident. In the absence of any separate Indian law for industrial/chemical accidents, only the Public Liability Insurance Act (1991) would have provided for immediate relief to the victims of a hazardous accident, which is a maximum of Rs. 25,000 per person plus reimbursement of medical expenses up to a maximum of Rs.12,500. Had India been a victim of a nuclear accident if there was no nuclear liability act in force, such lowly compensation for the victims would have been upsetting for the nation in the global forum.

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52 Shri Prithviraj Chavan(Minister of Sciences and Technology and Earth Sciences ) introducing the Civil Liability for Nuclear Damage Bill in the Lok Sabha on 25.08.2010, Legislative Brief: Civil Liability for Nuclear Damage, 2010, PRS Legislative Research, at: http://www.prsindia.org/uploads/media/Nuclear/Final%20Brief%20%20civil%20liability%20for%20nuclear%20damage%20bill.pdf [hereinafter LEGISLATIVE BRIEF], last accessed on August 18, 2012
B. Global and National Standpoint: An Assessment

Since its existence on the Statute Book the Indian nuclear liability law has been a subject matter of discussion in the international nuclear arena. At the international level there are four instruments for nuclear liability i.e. the OECD’s Paris Convention of 1960 (entered into force in 1968) which was strengthened by the Brussels Supplementary Convention (BSC) in 1963, the IAEA’s Vienna convention of 1963 (entered into force in 1977), and the yet to come into force Convention on Supplementary Compensation.  

Each of these conventions are based on the following basic principles:

i. Channeling of liability to the installation operator regardless of cause of the accident;

ii. Absolute liability or strict liability of such an operator, which relieves the victim from burden of proof;

iii. Liability limited in amount;

iv. Liability limited in time;

v. Include a single competent court to adjudicate claims;

vi. Compulsory financial security of the operator’s liability through insurance coverage or any other means; and

vii. Non-discrimination based on nationality, domicile or residence.

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The operator’s liability is generally limited or fixed to ensure that there is sufficient compensation provision for the victims and that the investment in the sector does not die out. However, to bridge the compensation gap beyond the operator limit, the conventions envisage a three-tier liability structure: operator liability, installation state liability, and liability of contracting parties to the convention (channeled through a contributory international fund). In principle, however, depending upon the convention adhered to, or an appropriate national legislation, operator’s liability may be kept limited or unlimited.\textsuperscript{56} The national legislations of Canada, China, Japan, Republic of Korea and South Africa follow the international principles of absolute and exclusive liability on the installation operator as well as exclusive jurisdiction of the court in the country’s territory. The US law, namely the Price-Anderson Act (PAA), is slightly different.

The reason for enacting a domestic legislation, apart from providing compensation, is to facilitate the joining of an international liability regime. Only international instruments or conventions for that matter provide for trans-border liability and thus a national legislation was required. Section 103 (b) (3) (E) of the Hyde Act, 2006 provides that it is the policy of the United States to encourage India to adopt the “Convention on Supplementary Compensation for Nuclear Damage (CSC)” of 1997.\textsuperscript{57} The CSC, however, requires national nuclear liability legislation that is consistent with the Annex to the Convention.\textsuperscript{58} Thus the national nuclear liability bill was modeled as per CSC terms.\textsuperscript{59} But the two are different on many conditions; CSC provides, for example, in Article 3(9) and (10)\textsuperscript{60}, that liability for nuclear damage is channeled exclusively to the operator of a nuclear installation “upon proof” that such damage has been caused by a nuclear incident, the Indian Act does not require furnishing of any such proof. To that extent the Bill leans towards the concept of “absolute liability” and is in sync with the concept of “polluter pays”, which is engrained in our jurisprudence post the Supreme Court

\textsuperscript{56} Supra note 53, pp. 4-5.
\textsuperscript{57} IAEA Doc. INFCIRC/567.
\textsuperscript{60} The Convention on Supplementary Compensation for Nuclear Damage was adopted on 12 September 1997 by a Diplomatic Conference held 8-12 September 1997, and was opened for signature at Vienna on 29 September 1997 at the 41st General Conference of the International Atomic Energy Agency.
decisions in Shriram Gas Leak\textsuperscript{61} and Indian Council for Enviro-Legal action vs. Union of India.\textsuperscript{62,63}

Furthermore, under CSC, suppliers are not to be held directly liable. Such provisions that would facilitate American export were of essential importance for the United States as it is in their interest. Assistant Secretary of State for South and Central Asia, Robert Blake, told the popular Japanese newspaper ‘Asahi Shimbun’ in an interview, “the ultimate goal of ours is, of course, to allow the export of nuclear reactors to India. As you know, the Indians have set aside two nuclear reactor park sites, in the states of Gujarat and Andhra Pradesh”.\textsuperscript{64} He was further quoted as saying that up to eight reactors could be located in each of those parks that represent significant export of American technology and also a source of jobs for the US to help its economic recovery.\textsuperscript{65} According to American commentary, the new Nuclear Liability Act was a “flawed civil nuclear liability legislation” which is not compatible with the US-India Agreement.\textsuperscript{66} The underlying aspect behind the US not being happy about the Indian legislation is that it has a Clause by means of which the operator can shift the liability on the supplier. Indian Prime Minister Manmohan Singh had defended the proposed Civil Liability for Nuclear Damage Bill in Parliament, saying that the legislation would allow India to participate in nuclear trade with foreign suppliers and "end nuclear apartheid" against the country.\textsuperscript{67} The Indian government is talking to US companies like GE Hitachi and Westinghouse (owned by Japan’s Toshiba) to become suppliers of nuclear instruments.\textsuperscript{68} But existence of such a Clause is not in their interest and its implication can be that they might not consent to contracting with the Indian government. Representatives from the nuclear industry have expressed concern over this provision of the legislation and its deviation from international standards.\textsuperscript{69} But quite recently,
the US.-based Westinghouse Electric has signed a preliminary deal to build a nuclear power plant in India, signaling the first significant forward movement on a contentious civilian nuclear deal agreed between the two countries in 2008. According to a release by Westinghouse, the new project would be a 1,000-megawatt reactor, to be built at Mithivirdi in the western state of Gujarat. Although the site has long been under consideration for a nuclear installation, the New Delhi government had previously suggested that it was rethinking the project due to concerns following the Fukushima disaster and renewed anti-nuclear public campaigns.

India’s ambitious wish to expand its nuclear energy sector several fold cannot be realized without international cooperation, especially without international supply. In the current international environment none of the major suppliers of nuclear equipment US/France/Russia/Germany etc will supply any such item to a country that does not have a liability act that does not conform to the international standards. Now that India has meticulously drafted and enacted it, “the US contends that the legislation is not in tune with the IAEA’s Convention on Supplementary Compensation thus making it difficult for US companies to start nuclear commerce with India.” The real issue is whether India needs any US assistance at all regarding its nuclear energy sector. Even if India needs nuclear power plants to supplement it energy requirement in future, India does not need nuclear power plants from USA. Russia can still supply whatever India needs at a much lower price. But even the Russian government had asked India for clarification regarding a provision of the civil nuclear liability law which potentially imposes liability on suppliers of nuclear technology and materials in case of an accident.

“The opponents of the bill are of the view that the much debated legislation has been enacted to suit the US suppliers and that it favors them. But this is completely misplaced and wrong

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71 Ibid.
75 Parashar, Sachin (2010), "After US., Russia upset over N-law" The Times of India, 13 September 2010.
because, one, its provisions are not US-specific and they will apply to all suppliers. Two, contrary to what critics and media commentators have consistently held, nuclear cooperation agreements with France and Russia have specifically provided for protecting the supplier against any liability claims in case of any damage due to nuclear accident.”  

Clauses of Article VIII of the India-France Cooperation Agreement on the development of Peaceful uses on Nuclear Energy of September 2009, concern civil nuclear liability: *each Party shall create a civil nuclear liability regime based on established international principles.*

In June 2000, the Governments of the Russian federation and the French Republic signed a bilateral agreement to “govern issues of liability for nuclear damage in the event of a nuclear incident within the territory of the Russian Federation that results from deliveries from the French Republic to nuclear installations in the Russian Federation”. So it is fairly clear that no reputable international supplier will be willing to supply India with any nuclear equipment without a nuclear liability regime conforming to international practice being enacted in India.

C. Issues of the Bill

1. *Whether private operators are permitted*

Initially the term ‘’operator’’, in relation to a nuclear installation, meant the person designated by the Central Government as the operator of that installation. It did not clearly specify whether private operators were permitted. The parliamentary standing committee submitted that a new sub-Clause specifying that only entities owned and controlled by the central government either directly or indirectly through any authority or corporation owned by it or a government company (as defined in the Atomic Energy Act, 1962) will be allowed to operate nuclear installations. The recommendation by the committee was accepted and Clause 3A was inserted accordingly. The Committee recommended that the Bill should be amended to prevent the entry of private operators. Subsequently, the definition of “operator” under Clause 2(l) was amended and Clause

76 *Supra note 53, pp. 2*
77 *Ibid., pp.6.*
2(m) was inserted which defined an “operator” with a more detailed outlook to include only the Central Government or any authority or corporation established by it or a Government company who has been granted a license under Atomic Energy Act for such an operation. Government companies are defined as entities where the government has at least 51% stake. Private sector involvement requires modifications in the regulatory framework guiding the country's strategic nuclear program and changes in the Atomic Energy Act, steps that will take some years before completion. At a press conference, Minister of State for Science and Technology Prithviraj Chavan says that, "we are inviting the private sector to come in as minority partners and learn the tricks of the trade.” Essentially, the state-owned Nuclear Power Corporation of India Limited (NPCIL) assumes responsibility for compensation, since private firms are allowed to participate in nuclear power generation to a maximum of a 26% stake. At present, however, no FDI or private ownership, which requires an amendment to the AEA, is envisaged and this was categorically stated by Minister Chavan on March 17 at ASSOCHAM. Evidently joint ventures between the government (NPCIL and BHAVINI) and the private entities may be permitted with the latter being a minority shareholder.

“It must be kept in mind that the United States has the largest number of NPPs and it has an extremely well developed private owned nuclear industry as well as insurance services. India, in comparison, has only state owned operators and there is, therefore, no insurance cover. The insurance industry too has, therefore, not evolved to deal with the nuclear industry. Indeed, Article 8 of the Bill specifies that a government operator need not take any insurance policy.”

2. **Whether there is absolute liability**

Chapter 11 the IAEA publication “Handbook of Nuclear law” suggests that the operator of a nuclear installation should be held liable, regardless of fault. According to it, “under the normal laws governing tort cases involving liability the plaintiffs have to prove that the defendants were negligent. In nuclear incidents the proof of causation depends upon presenting sophisticated scientific evidence given the nature of NPP operations. Such proofs may well be beyond the means of most plaintiffs and would in case, require substantial time to be established.”

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79 “Chavan rules out private participation in nuclear power sector” The Hindu, 11 October 2010.
80 Supra note 53, pp. 8.
Therefore, the first requirement of a civil nuclear liability bill should be the principle of strict liability on the part of the operator. The Civil Liability for Nuclear Damage Act, 2010 does achieve that by means of Section 4 wherein it says that “The operator of the nuclear installation shall be liable for nuclear damage caused by a nuclear incident.” Its liability “shall be strict and shall be based on the principle of no-fault liability” (paragraph 4). But “the Bill provides only 'liability' and not 'absolute liability' betraying a built-in escape option provided for both the operator and the Government. The CSC provides that the liability of the operator is absolute, i.e., the operator is held liable irrespective of fault. The exclusion of absolute liability creates ambiguity on what the Government's real objective is in promoting the Bill. Absolute liability cannot be calculated immediately after an accident but the Bill must ensure that absolute liability is provided for and the responsibility jointly shared between the operator and the Government.”

3. Whether total liability is insufficient

Clause 6 (1) fixes the “maximum amount of liability in respect of each nuclear incident” at the rupee equivalent of 300 million Special Drawing Rights (1 SDR = approx $1.54 as of February 2010), which equals $460 million or Rs. 2100 crore. One incentive to set the amount of financial liability at the minimum is because any insurance premium paid by the supplier or the operator will add to the overall cost of business. This in turn means that it will cost the government more money to set up the plant, as well as cost the public more to buy the electricity. A second incentive is that following the Convention on Supplementary Compensation (CSC) for Nuclear Damage a country is eligible for international funding in the case of an accident—but only if its cap sits at 300 million SDR and the costs of an accident end up exceeding that amount. The parliamentary standing committee felt that this Clause needed to be modified. It wanted to give the central government the power to notify a higher amount of total liability if required. The recommendation of the committee was accepted and amendments were made. The central

82 Amendment No. 6, Notice of Amendments, Civil Liability for Nuclear Damage Bill - 2010, August 20, 2010, pp. 6.
83 Supra note 40, pp.6.
84 Supra note 51, pp. 2.
86 Supra note 51, pp. 2.
government, now, has been empowered to take additional measures beyond the capped amount if the amount of compensation exceeds 300 million SDR.

Therefore, an issue does arise whether the capping of the liability under the Bill goes against the concept of “polluter pays principle” and “absolute liability”? On this aspect, once Section 5 proviso read with Section 46 of the Bill is noted, it would appear that damages under the Bill would be in addition to damages payable under any other law. By implication, it would cover damages payable under law of Torts as well and even criminal laws. On a combined reading it would thus appear that while prima facie the operator's liability does appear to be capped, however, in reality it is unlimited given that the Bill does not seek to take away the rights of a claimant to proceed under the general law.87

4. Whether operator’s liability is low

As regards the maximum liability of an operator, Clause 6(2) fixed it at Rs. 500 crores. But the financial liability provided for in the aforementioned Section does not even come close to the financial packages offered in other countries. An inquiry into the same reveals data that, sadly, the lawmakers did not pay much attention to while drafting the legislation. The Price Anderson Act in the US has limited the operator’s liability to about $11 billion per incident industry maximum. India’s operator’s liability cap is just one percent of that. A 1997 study by the US. government's own Brookhaven National Laboratory, on Long Island, New York, found that the severe spent fuel pool accidents could result in damages from somewhat under $1 billion of up to $566 billion, depending on how full and hot the pool is at the time of the accident and the intensity of the postulated fire.88 The high-end figure would amount to over $700 billion in 2009 dollars. Both the US. and Indian governments seem to be secure in the idea that such a severe nuclear power plant disaster is so unlikely that it can be disregarded. As far as the Vienna Convention is concerned, it does not limit the operator’s liability in any way. But making the

87 Supra note 63.
liability unlimited would make any project unviable as the operator will never be able to secure the financial security for the same.

A majority of the experts who deposed before the Committee were of the view that the cap on liability of an operator to Rs. 500 crore is on the lower side and it should be increased.\(^89\) The Committee was also of the opinion that keeping in view the disastrous effects of a nuclear incident and the consequent loss or injury to life, damage to property, economic loss, cost of measures for reinstatement of the damages to the environment, keeping the level of liability of the operator to Rupees 500 crores seems to be inadequate. Since the operator holds a no-fault liability and is being held responsible for a nuclear incident, the Committee was of the opinion that it should bear a substantial cost of payment of compensation for the nuclear incident.\(^90\) Keeping in view of the inflation level and purchase value of Indian currency the operator’s liability was raised to Rs 1,500 crore.

The Committee stated that the government may create a separate category for small reactors, research facilities and reprocessing plants. The further proviso to Clause 6 (2) of the Bill which gave power to the Central Government to either increase or decrease the amount of liability of the operator by notification, having regard to the extent of risk involved in a nuclear installation, was not justified and was amended to the extent that the government may increase the liability but in no case should it decrease it. Further amendments included that, a) the operators of nuclear installations producing more than 10 MW of energy shall be liable up to Rs 1,500 crore; b) for spent fuel re-processing plants, the liability is Rs 300 crore; c) for, a research reactor producing energy below 10 MW the liability is Rs 100 crore. The fact which is enlightening is that most nuclear installations producing nuclear energy generate more than 10 MW of thermal energy.\(^91\) But further revision of the operator liability cap should be considered as Rs. 1,500 crore is still not a satisfactory amount considering standards set by international regimes.

\(^89\) Supra note 15, pp. 18.
\(^90\) Ibid.
5. Liability of the Central Government

Section 7 of the Bill states that the Central Government shall be liable to pay only in the following circumstances—where the liability exceeds the amount of liability of an operator specified under sub-Section (ii)(6), to the extent such liability exceeds such liability of the operator, occurring in a nuclear installation owned by it occurring in account of causes specified in Clause (i) and (ii) of sub-Section one. This Clause attempts to create a distinction between the operator and the Government when both are the same in the Indian context. Another ambiguity is whether no liability arises on a Public Sector operator and whether the Public Sector operator does not even have to opt for insurance cover as the Government is liable for nuclear installations it owns.\textsuperscript{92} Section 5, quite easily, said that the operator is not liable for nuclear damage caused due to armed conflict, hostility, civil war and terrorism. If the State is not capable of providing adequate security to nuclear establishments the issue is whether the State should even be allowed to operate nuclear reactors in the first place. Though there was no recommendation made by the standing committee in this regard the government made an amendment to introduce that the Central Government may assume the liability of a nuclear installation “not operated by it” by notification if it feels that doing so in the public interest.\textsuperscript{93} The noticeable aspect of this amendment is that it talks about nuclear installations not operated by the Central Government which goes on either to show the Government’s intention to introduce private entities in the nuclear operational sector with major stake or a flaw in the amendment. But if the operator is a joint venture government company, this Clause implies that the government may take over the liability of the private shareholders.

6. Time-limit for claiming compensation

Before amendments to the act were added, Section 18, which talks about the time-limit for claiming compensation for suffering nuclear damage, had limited it to ten years from the date the nuclear incident is notified which implied that the right to claim compensation would get

\textsuperscript{92} Supra note 40, pp. 7.
\textsuperscript{93} Amendment No. 9, Notice of Amendments, Civil Liability for Nuclear Damage Bill - 2010, August 20, 2010, pp. 2.
extinguished after ten years from the date of notification of nuclear incident. Using the past nuclear accidents as references, 10 years is too a limited time frame to assess the extent or quantum of damages as usually the adverse effects of internal and external radiation exposure manifest themselves often quite late. The long-term health effects of an accident may not be known until after 10 years, and research and studies on long-term damage and illnesses can take more than 10 years to be conducted and published.\textsuperscript{94} Similar Clauses in the Vienna and Paris Conventions allow for a 30-year claim window. Flowing from this, several policy makers had suggested increasing the period of extinction of right to claim to 20-30 years. The standing committee was of the opinion “that the right to claim compensation of any nuclear damage in case of personal injury is short and may be increased to twenty years.” The Government took notice of the recommendation and the Clause was amended accordingly. Now, for damage to property, the right to claim extinguishes beyond ten years and for personal injury to any person, the time-limit for claiming compensation has been increased to 20 years.\textsuperscript{95} Another important point is that the Act makes it necessary for the Atomic Energy Regulatory Board to notify of a nuclear incident within a period of 15 days but it does not specify anything about the consequences if it fails to do so within the prescribed limit. It is submitted that the AERB be asked to notify about a nuclear incident within a period of 48 to 72 hours as 15 days is too long a period of time and a lot of loss can take place if immediate notification is not made.

\textbf{7. Bar on Jurisdiction of civil courts}

Section 9 of the Nuclear Liability Act provides that whoever suffers nuclear damage shall be entitled to claim compensation in accordance with the provisions of the act. A further sub Clause states that in respect of the settlement and adjudication of claims for compensation of nuclear damage not the regular courts are competent, but one or more Claims Commissioners. They will have to that extent the authority and function of a ‘civil court’.\textsuperscript{96} According to Section 32(4), the Claims Commission will not be bound by normal civil procedural law, but “shall be guided by

\begin{flushleft}
\textsuperscript{94} Supra note 51, pp.3.
\textsuperscript{95} Amendment No. 15, Notice of Amendments, Civil Liability for Nuclear Damage Bill - 2010, August 20, 2010, pp. 3.
\textsuperscript{96} See Section 12, Civil Liability for Nuclear Damage Act, 2010.
\end{flushleft}
the principles of natural justice”.\(^{97}\) Clause 35 contained provisions for exclusion of jurisdiction of civil courts. It said that the civil courts have no authority on nuclear accident claims. Trials would go to the Nuclear Damage Claims Commissions, and be adjudicated by the Claims Commissioner appointed to each prescribed ‘zone.’

The intention of the lawmakers was to ensure that prompt remedy is given to the victims without protracted litigation. Experts on nuclear liability were of the opinion that Section 35 attempts to take away the right of the victims to appeal against the award of the Claims Commissioner or the Commission for that matter. Since the Commissioners and members of the Commission are persons taken mostly from administrative and government service background and they cannot be viewed on par with justices of High Courts or the Supreme Court. Clause 38 is permitted to be dissolved even in the event that there exist pending cases. The judiciary should have authority on these cases, rather than a 6-person commission.\(^{98}\) In our democracy, where the ultimate judicial responsibility rests with the Supreme Court of India, every citizen must have the right to approach the judiciary at the highest level, if need be to seek redressal.\(^{99}\) The committee, in this regard, recommended that victims should have a right to appeal to High Courts and the Supreme Court.\(^{100}\) The amendments made in this regard were that (a) the Supreme Court and (b) the High Courts exercising their jurisdiction under Article 226 (writ jurisdiction) and Article 227 (High Court’s power over tribunals) will have jurisdiction.\(^{101}\) Apart from the aggrieved persons who may initiate civil action, any “public-spirited” individual can file a “public interest litigation” under the writ jurisdiction of the Supreme Court or High Courts. In addition, claims in the form of class actions may be filed before civil courts.\(^{102}\)

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\(^{98}\) Supra note 51, pp. 3.

\(^{99}\) Supra note 54, pp. 9.

\(^{100}\) Ibid, pp. 20.

\(^{101}\) Amendment No. 18, Notice of Amendments, Civil Liability for Nuclear Damage Bill - 2010, August 20, 2010, pp. 3.

\(^{102}\) Saraf, Mohit (2010), Civil Nuclear Liability Law in India; at: www.usibc.com/sites/default/lkcivilnuclearliabilitylawinindia1.pdf; Mohit Saraf is Senior Partner at Luthra & Luthra Law Offices.
8. Recourse against suppliers

The most talked about Clause in the act was Clause 17 which provided for recourse under three conditions: (a) if there is a written contract giving such a right, (b) if the suppliers or his employee causes damage through gross negligence or a willful act, or (c) damage has resulted from the act or omission of a “person” with intent to cause damage. This Clause allows for a right of recourse by the operator against a negligent third-party supplier, thus making supplier’s liability a part of Indian nuclear law. Experts are well aware of the political charge accompanying these concerns and the divisive views held by industry bodies on the one hand and several members of civil society on the other, which has seemingly given rise to an internal debate within the government, manifested in the DAE Secretary’s initial deletion of Clause 17(b) followed in oral hearing by its retraction.

It is necessary to briefly consider the concept of “legal channelling” of liability, which is the cornerstone of the regime and several national jurisdictions. Channelling of liability is a legal construct by which the person to whom liability is channelled is the only one from whom an injured party can claim compensation. According to this understanding, liability arising from a nuclear incident is, by law, channeled to the nuclear operator. One important reason for fixing the liability, which normally is the practice in nuclear liability, is to provide the victims with a single source of remedy. However, this should not mean that it overseas supplier’s liability. Clause 17 does specify supplier’s liability but it is under contractual liability. It allows only the operator to sue manufacturers and suppliers for negligence in case of nuclear disaster. Beyond

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106 Supra note 27, pp. 13.
this contractual liability, statutory liability is also necessary as contractual responsibilities tend to be skewed in favour technology owners.  

Section 16 of the Austrian Atomic Liability Act 1999 imposes concurrent liability for nuclear damage on the operator, carriers and the suppliers. Furthermore the Atomic Liability Act, in addition to holding the operator and liable on a no fault basis holds supplier and carriers concurrently liable on the principles of ordinary tort law and law relating to product liability. Under the Indian Act, victims can only sue the operator, and not the manufacturers and suppliers. However, in India the operator will be a government owned facility. Therefore if victims sue the government and receive monetary compensation, the money will come from fellow taxpayers. It is also crucial to note that Clause 17(b) used the word “person” as opposed to “individual” which would include both physical as well as corporate persons against whom recourse actions could lie. If Section 17 is read along with Section 6 then the inference can be drawn that the amount that the operator can claim from the suppliers is limited to the amount specified in Clause 6. The Russian Federal Act on Atomic Energy does not impose a limit upon the operator’s right of recourse. The experts were of the view that the Right of Recourse should be a separate Clause altogether and should not be mixed with claims and awards and the operator of a nuclear installation shall be absolutely liable to pay the damages caused by the nuclear incident. Furthermore, international regimes like the Paris Convention, the Vienna Convention and the 1997 CSC provide for recourse only if: (a) there is a written contract and (b) if the damage results from an act or omission of someone with intent to cause damage. Thus in the origins of the international civil nuclear liability regime the right to recourse was seen as a limited exception to the principle of legal channelling of liability, chiefly protecting nuclear suppliers. So, a legislation providing an additional right of recourse against the supplier for a

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109 Manoj Kumar & Lydia Powell, “Civil Liabilities for Nuclear Damages Bill 2010 - The Way Forward” Observer Research Foundation, Issue Brief No. 24, August 2010, pp.8, at: www.orfonline.org; Manoj Kumar is Managing Partner with Hammurabi & Solomon(New Delhi), Lydia Powell is Senior Fellow, Observer Research Foundation(New Delhi).
110 Supra note 51, pp. 3.
111 Supra note 104, pp. 8.
112 In different jurisdictions different caps are placed on the operator’s liability and the Government steps in to make up the balance.
114 Supra note 54, pp. 8
willful act or negligence could not be compliant with CSC which Government proposes to join.\textsuperscript{115}

The standing committee was of the view that the implication of the word “wilful act or gross negligence” is quite vague in the context of the present Bill. In case an incident takes place it would be quite difficult to prove and establish the fact that it was a wilful act or gross negligence on part of the supplier. Hence there should be clear cut liability on the supplier of nuclear equipments/material in case they are found to be defective. National criticism ignited on the point of supplier’s liability. It was alleged that the supplier would be relieved from liability either entirely, or, at any rate, disproportionally far-reaching.\textsuperscript{116} Clause 17(b) seems to be providing the suppliers/manufacturers with an escape route for fleeing liability since willful act or gross negligence on their part is arduous. The committee made two recommendations for this Clause; Clause 17(b) should cover latent or patent defects in the equipment, or gross negligence of the supplier. The requirement of committing a “willful act” should be removed. Clause 17(a) should end with an “and” so a written contract is necessary for having recourse under the other two conditions.

The amendments which were made in this regard were that: i) an operator has a right to recourse only after paying the compensation (which is to avoid any delay in compensating the victims), ii) Clause 17(b) requires (a) intent to cause damage on the part of the supplier or his employees, and (b) latent or patent defects.\textsuperscript{117} The committee had also proposed removing of proving intent but the amendment did not change anything in this regard. Additionally, the committee’s recommendation of inserting the word “and” at the end of sub-Clause (a) was not accepted.

\textsuperscript{115} Ibid, pp. 9.
\textsuperscript{117} Amendment No. 13, Notice of Amendments, Civil Liability for Nuclear Damage Bill - 2010, August 20, 2010, pp. 3.
VI. CONCLUSION

This paper has discussed the various facets of nuclear power generation around the world. Initially by talking about the importance of nuclear energy by virtue of it being a clean source of power, the superior qualities of atomic energy were highlighted. But the discussions later on revealed that nuclear power is essentially a necessary evil.

The atomic power development all over the world shows an inclination towards increasing tendency to harness nuclear energy. There have been many conventions and meetings regarding its issues and the world superpowers have always taken different standpoints against the other countries at global forums. Thus, there exists visible divergence in views among various countries but there lies no consensus on achieving a nuclear free world as the proponents are greater in number than the opponents.

As far as India is concerned, recent progress shows that the nation is also ready to take the colossal step in becoming a dominant country in the power sector. The not so old INDO-US deal of 2008 can be seen as a positive stride in India’s nuclear prowess. Flowing from it, the passing of the Civil Liability for Nuclear Damage Bill in 2010 was a momentous affair in India’s foreign policy but there are some provisions which are being disputed even today notwithstanding the 18 amendments that the government brought in. Provisions like limiting the total liability, capping of operator’s liability, right of recourse against the supplier were modified but are still porous. The researchers are of the opinion that the operator’s liability should be increased further and there should not exist any way by means of which the supplier’s legal responsibility can be limited. India should not appear to be bowing before global superpowers and have a strong legislation on nuclear liability which has no loopholes on making the supplier liable in the event of a nuclear mishap.

At the end, it must be remembered that everything comes at a cost. The world has already experienced three major nuclear disasters and another one cannot be afforded. Thus the executive heads of the countries wishing to realize their vision of harnessing nuclear energy at a major scale must strive towards incorporating a risk free method of using atomic energy to make the world a better and safer place to live in.

To change our future we must carefully lead our present. So any decision regarding nuclear power should not be taken in haste and proper discussions and dialogues must be undertaken before initiating any progress in the nuclear power programs.
VII. NOTES


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