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Martin Mador, Legislative Chair
Committee on Children

February 16, 2016

Testimony In Support of

HB 5139 An Act Concerning The Use Of Recycled Tire Rubber

At Municipal And Public School Playgrounds

I am Martin Mador, 130 Highland Ave., Hamden, CT 06518. I am the
volunteer

Legislative Chair for the Connecticut Chapter of the Sierra Club. I hold a
Masters of

Environmental Management degree from the Yale School of Forestry
and Environmental
Studies.

You may have heard frequent accounts of significant health impacts
from

artificial/synthetic turf fields. I won't repeat those accounts here. Studies
are ongoing. Just this

week we heard that the U.S. Environmental Protection Agency (EPA),
the Centers for Disease

Control and Prevention/Agency for Toxic Substances and Disease
Registry (ATSDR), and the

Consumer Product Safety Commission (CPSC) will work
collaboratively on a study. Attached to

my testimony is the letter from Senators Blumenthal and Nelson to the
President requesting such

a study.

It is now incumbent on the state of Connecticut to recognize the
potential risks here. Not

only do we continue to allow installation of new fields, we are even
using state money to pay for

them. Even though we understand that we are knowingly spreading toxic
chemicals to our

environment.

I want to discuss a concept which may be new to some of you. We have raised it here

before this committee in relation to other issues. One of the most important concepts I have come

across in my years of legislative advocacy is the **Precautionary Principle**. It teaches us that,

once there are credible grounds to believe something may be harmful, then the time has come to

take action. It is often applied in Europe, and is just starting to take hold in America. Avoiding

harm must be our first priority. Protecting the health of our environment, our population, our

wildlife, certainly our children, must come first.

From the Wingspread Conference statement:

It is necessary to implement the Precautionary Principle: When an activity raises

threats of harm to human health or the environment, precautionary measures

should be taken even if some cause and effect relationships are not fully established scientifically.

The Precautionary Principle has been a guiding force in Europe and parts of America for,

well, the entire century. But it has not yet become universally established throughout the US. We

still apply the legal doctrine of proof beyond any reasonable doubt, no matter what the situation.

But we need a guide for making decisions where there is some uncertainty to ensure that human

and environmental health are both prioritized and protected.

We are not in a court of law with strict standards of evidence and the need for a finding

beyond some legal standard to reach a judgement. We are in the legislature, which has an

affirmative duty to act to protect the public health and welfare.

Why is this important for you? Because you are not simply making a decision based on the narrow applicability of statutes, regulations, etc. Your decision to advance this bill may very well influence the health of children and others for as long as the artificial turf they play on remains in place. You need to make sure you are doing your best to protect them. You need to make sure your judgement is well reasoned, and guided by the very best principles and values. And that's why the Precautionary Principle is so, so important. Yes, installing new artificial turf on a playing field may be convenient. It may save a little money. Possibly make upkeep a tiny bit easier. But we have enough evidence to know it puts our children at risk. The knowing and intentional introduction of toxic chemicals into our environment is just not acceptable. Ground up tires contain those toxics. We understand better alternatives. Organically treated grass playing fields work, after a short transition period. We now have case studies which show it. In my life as a public interest advocate (sometimes I prefer treehugger with a pitchfork), this is perhaps the most useful concept guiding public policy I've encountered. Attached to my testimony are excerpts from a dozen published articles and statements. This is hardly a new or obscure concept, although we have yet to fully recognize its importance in America.

So please vote to support HB5139.

The Precautionary Principle

Selected Excerpts from the Literature

noun

1. the precept that an action should not be taken if the consequences are uncertain and potentially dangerous

Collins English Dictionary - Complete & Unabridged 2012 Digital Edition

© William Collins Sons & Co. Ltd. 1979, 1986 © HarperCollins Publishers 1998, 2000, 2003, 2005, 2006, 2007, 2009, 2012

Contemporary definitions for precautionary principle in environmental matters, the theory that if the effects of a product or action are unknown, then the product should not be used or the action should not be taken

Word Origin 1988

<http://dictionary.reference.com/>

The Wingspread Consensus Statement on the Precautionary Principle
The release and use of toxic substances, the exploitation of resources, and physical alterations of the environment have had substantial unintended consequences affecting human health and the environment.

Some of these concerns are high rates of learning deficiencies, asthma, cancer, birth defects and species extinctions; along with global climate change, stratospheric ozone depletion and worldwide contamination with toxic substances and nuclear materials.

We believe existing environmental regulations and other decisions, particularly those based on risk assessment, have failed to protect adequately human health and the environment - the larger system of which humans are but a part.

We believe there is compelling evidence that damage to humans and the worldwide environment is of such magnitude and seriousness that new principles for conducting human activities are necessary.

While we realize that human activities may involve hazards, people must proceed more carefully than has been the case in recent history. Corporations, government entities, organizations, communities, scientists and other individuals must adopt a precautionary approach to all human endeavors.

Therefore, it is necessary to implement the Precautionary Principle:
When an activity raises threats of harm
to human health or the environment, precautionary measures should be
taken even if some cause and effect
relationships are not fully established scientifically.

<http://www.sehn.org/wing.html>

The precautionary principle is the concept that establishes it is better to
avoid or mitigate an action or policy
that has the plausible potential, based on scientific analysis, to result in
major or irreversible negative
consequences to the environment or public even if the consequences of
that activity are not conclusively
known, with the burden of proof that it is not harmful falling on those
proposing the action. It is a major
principle of international environmental law and is extended to other
areas and jurisdictions as well.

This principle is important in that it allows one to anticipate harm and
take appropriate precautions even in
the absence of scientific consensus that the action or policy is harmful
and what might be the level of harm.

As a result, policy makers are able to make discretionary decisions to
delay such an action until scientific

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findings emerge that provide sound evidence that no harm will result. It
is analogous to such commonplace
aphorisms as "an ounce of prevention is worth a pound of cure," "better
safe than sorry," "look before you
leap," and the ancient medical principle associated with Hippocrates of
"First, do no harm."

In some legal systems, as in the law of the European Union, the
application of the precautionary principle
has been made a statutory requirement. However, a rigid application of
this principle also has drawbacks,
such as ignoring possible risks associated with not doing the proposed
activity or policy, perhaps resulting in

banning a technology that brings advantages out of concern for potential negative impacts. Under such a scenario, the cellular phone might not have been permitted until it could be proved not to be a carcinogen. In the case of the pesticide DDT, if the precautionary principle were to be applied universally and narrowly, it would mean that DDT could not even be introduced into regions heavily infected by malaria because of the deleterious potential impacts of DDT on the fauna.

The precautionary principle recognizes a social responsibility to protect the public from exposure to harm, when scientific investigation has found a plausible risk. Its development as part of international law reflects a growing international recognition of the human responsibility to care for the environment and others and to find legal avenues to prevent actions that might cause severe or irreversible consequences to either.

http://www.newworldencyclopedia.org/entry/Precautionary_principle

The Precautionary Principle: Protecting Public Health and the Environment

Ted Schettler, MD, MPH, Katherine Barrett, PhD, Carolyn Raffensperger, MA, JD

Science and Environmental Health Network

Adapted from an essay by Schettler et al. in: McCally 2002.

The precautionary principle is a guide to public policy decision making (Raffensperger and Tickner 1999,

Schettler et al. 2002). It responds to the realization that humans often cause serious and widespread harm to

people, wildlife, and the general environment. According to the precautionary principle, precautionary action

should be undertaken when there are credible threats of harm, despite residual scientific uncertainty about cause and effect relationships.

<http://www.healthandenvironment.org/articles/doc/540>

Environment management rule that if a threat of serious or irreversible damage to the environment or human

health exists, a lack of full scientific knowledge about the situation should not be allowed to delay containment or remedial steps if the balance of potential costs and benefits justifies enacting them. In other words, "prevention is better than cure." Also called preventative principle.

<http://www.businessdictionary.com/definition/precautionary-principle.html>

In line with the mandate given by the Third Ministerial Conference on Environment and Health, WHO has

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developed an approach that will promote preventive public health measures in areas of emerging concern about environmental impacts on children's health. The approach focuses on how the precautionary principle can be applied to the protection of children's health and that of future generations. In so doing, the goal of WHO is to guide and improve decision-making in environment and health under conditions of uncertainty and complexity, while stimulating scientific development and more sustainable forms of economic development. The approach is sufficiently flexible to be applied by all countries in the WHO European Region, regardless of their available resources.

http://www.euro.who.int/_data/assets/pdf_file/0003/91173/E83079.pdf

WHEREAS, the Precautionary Principle dictates that where threats of serious or irreversible damage to people or natural systems exist, lack of full scientific certainty relating to cause and effect shall not be viewed as sufficient reason to postpone measures to prevent the degradation of the environment or protect human health. The precautionary principle requires a careful analysis of available alternatives using the best science and selection of the alternative presenting the least potential threat to human health and natural

systems; and selecting the alternatives that minimize human impacts to human health and the environment often results in long-term cost savings; and WHEREAS, the United States has endorsed the Precautionary Principle in international and other statements such as the Rio Declaration of the 1992 United Nations Conference on the Environment and the Persistent Organic Pollutant Treaty; and WHEREAS, the city of San Francisco has adopted a number of successful environmental ordinances applying a precautionary principle approach to specific City purchases and activities including the Integrated Pest Management Ordinance, the Resource Efficient Building Ordinance, the Healthy Air Ordinance, and the Environmentally Preferable Purchasing Ordinance; and http://sfgov.org/sites/sfgov.org.sffood/files/migrated/ftp/uploadedfiles/sffood/policy_reports/Precautionary%20Principle%20r0129-03.pdf

The Precautionary Principle is defined as follows:

When human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. Morally unacceptable harm refers to harm to humans or the environment that is threatening to human life or health, or serious and effectively irreversible, or inequitable to present or future generations, or imposed without adequate consideration of the human rights of those affected.

The judgement of plausibility should be grounded in scientific analysis. Analysis should be ongoing so that chosen actions are subject to review. Uncertainty may apply to, but need not be limited to, causality or the bounds of the possible harm.

Actions are interventions that are undertaken before harm occurs that seek to avoid or diminish the harm.

Actions should be chosen that are proportional to the seriousness of the potential harm, with consideration of their positive and negative consequences, and with an assessment of the moral implications of both action

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and inaction. The choice of action should be the result of a participatory process.

Source: UNESCO COMEST report The Precautionary Principle

<http://www.precautionaryprinciple.eu/>

Over the past decades, the PP has become an underlying rationale for a large and increasing number of

international treaties and declarations in the fields of sustainable development, environmental protection,

health, trade and food safety. In its most basic form, the PP is a strategy to cope with scientific uncertainties

in the assessment and management of risks. It is about the wisdom of action under uncertainty: ‘Look before

you leap’, ‘better safe than sorry’, and many other folkloristic idioms capture some aspect of this wisdom.

Precaution means taking action to protect human health and the environment against possible danger of

severe damage. However, in the international arena, different views exist of what precaution is and the PP

has different interpretations.

The PP is often seen as an integral principle of sustainable development, that is development that meets the

needs of the present without compromising the abilities of future generations to meet their needs. By

safeguarding against serious and, particularly, irreversible harm to the natural resource base that might

jeopardize the capacity of future generations to provide for their own needs, it builds on ethical notions of

intra- and inter-generational equity.

The Precautionary Principle, World Commission on the Ethics of Scientific Knowledge and Technology

(COMEST)

<http://unesdoc.unesco.org/images/0013/001395/139578e.pdf>

The precautionary principle enables rapid response in the face of a possible danger to human, animal or plant health, or to protect the environment. In particular, where scientific data do not permit a complete evaluation of the risk, recourse to this principle may, for example, be used to stop distribution or order withdrawal from the market of products likely to be hazardous. Communication from the Commission on the precautionary principle (COM(2000) 1 final of 2 February 2000)

SUMMARY

The precautionary principle is detailed in Article 191 of the Treaty on the Functioning of the European Union (EU). It aims at ensuring a higher level of environmental protection through preventative decision-taking in the case of risk. However, in practice, the scope of this principle is far wider and also covers consumer policy, European legislation concerning food and human, animal and plant health.

This Communication establishes common guidelines on the application of the precautionary principle.

The definition of the principle shall also have a positive impact at international level, so as to ensure an appropriate level of environmental and health protection in international negotiations. It has been recognised by various international agreements, notably in the Sanitary and Phytosanitary Agreement (SPS) concluded in the framework of the World Trade Organisation (WTO).

Recourse to the precautionary principle

According to the European Commission the precautionary principle may be invoked when a phenomenon, product or process may have a dangerous effect, identified by a scientific and objective evaluation, if this evaluation does not allow the risk to be determined with sufficient certainty.

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Recourse to the principle belongs in the general framework of risk analysis (which, besides risk evaluation, includes risk management and risk communication), and more particularly in the context of risk management which corresponds to the decision-making phase. The Commission stresses that the precautionary principle may only be invoked in the event of a potential risk and that it can never justify arbitrary decisions.

The precautionary principle may only be invoked when the three preliminary conditions are met:

- identification of potentially adverse effects;
- evaluation of the scientific data available;
- the extent of scientific uncertainty.

Precautionary measures

The authorities responsible for risk management may decide to act or not to act, depending on the level of risk. If the risk is high, several categories of measures can be adopted. This may involve proportionate legal acts, financing of research programmes, public information measures, etc.

Common guidelines

The precautionary principle shall be informed by three specific principles:

- the fullest possible scientific evaluation, the determination, as far as possible, of the degree of scientific uncertainty;
- a risk evaluation and an evaluation of the potential consequences of inaction;
- the participation of all interested parties in the study of precautionary measures, once the results of the scientific evaluation and/or the risk evaluation are available.

In addition, the general principles of risk management remain applicable when the precautionary principle is invoked. These are the following five principles:

- proportionality between the measures taken and the chosen level of protection;
- non-discrimination in application of the measures;
- consistency of the measures with similar measures already taken in similar situations or using similar approaches;
- examination of the benefits and costs of action or lack of action;
- review of the measures in the light of scientific developments.

The burden of proof

In most cases, European consumers and the associations which represent them must demonstrate the danger associated with a procedure or a product placed on the market, except for medicines, pesticides and food additives.

However, in the case of an action being taken under the precautionary principle, the producer, manufacturer or importer may be required to prove the absence of danger. This possibility shall be examined on a case-by-case basis. It cannot be extended generally to all products and procedures placed on the market.

<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV%3A132042>

The precautionary principle or precautionary approach to risk management states that if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is not harmful, the burden of proof that it is not harmful falls on those taking an action.

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The principle is used by policy makers to justify discretionary decisions in situations where there is the possibility of harm from making a certain decision (e.g. taking a particular course of action) when extensive scientific knowledge on the matter is lacking. The principle implies that there is a social responsibility to

protect the public from exposure to harm, when scientific investigation has found a plausible risk. These protections can be relaxed only if further scientific findings emerge that provide sound evidence that no harm will result.

In some legal systems, as in the law of the European Union, the application of the precautionary principle has been made a statutory requirement in some areas of law.

Regarding international conduct, the first endorsement of the principle was in 1982 when the World Charter for Nature was adopted by the United Nations General Assembly, while its first international implementation was in 1987 through the Montreal Protocol. Soon after, the principle integrated with many other legally binding international treaties such as the Rio Declaration and Kyoto Protocol.

https://en.wikipedia.org/wiki/Precautionary_principle

What is fundamentally new about the precautionary approach is that it asks not, "How much harm is acceptable?" but instead asks, "How much harm is avoidable?" It invites us to set goals, examine alternative ways of achieving those goals, set benchmarks, check our progress, and engage affected parties in decisions.

It asserts an important, even heroic, role for government, and it offers us all an opportunity to re-energize participatory democracy and continue building a multi-issue social movement grounded in science, ethics, social justice, and public health.

http://www.sehn.org/erf_Montague.html

The precautionary principle is an emerging principle of international law but has only recently been proposed in North America as a new basis for environmental policy. On the surface it is a simple, commonsense proposition: in the face of possible harm, exercise precaution. But the enthusiasm the

principle has stirred among public advocates suggests it has a deeper appeal. It is, in fact, based on values related to “forecaring for life” and the natural world. The principle cannot effectively be invoked without stating these values up front. The principle makes it clear that decisions and developments in science and technology are based first of all on values and only secondarily on scientific and technological fact and process. Moreover, a precautionary approach is best carried out in the context of goals that embody the values of communities and societies.

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<http://www.sehn.org/pdf/putvaluesfirst.pdf>