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U.S. Environmental Protection Agency
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Submitted via E-mail to OIG_Hotline@epa.gov

On behalf of MAWETAL LLC (Requester) and its two individual members engaged in liquid marine fuels development [1], I write to request an inquiry into whether activity prior to 2017 by Administration of U.S. Environmental Protection Agency (EPA) (Pre-2017 Administration) in regard to the Endangerment [2] and Paris Climate Agreement [3] violate the EPA's Scientific Integrity Policy (Policy) [4].

Executive Summary [5]

To be clear, this Request is a blatant demand for investigation as to whether EPA's Policy proscribed Pre-2017 Administration action, or inaction or deferral to others to act, that obfuscated potential United Nations (UN) global taxation of marine fuels contrary to USA principles. [5]

A) First, 'outer layer' of a possible rotten onion = What marine tax? A new UN tax?

- (i) Tax the blind, on what they cannot see -
let them find, a global fuel levy
intertwined with wind of open sea? [2][3][15][16]
- (ii) Tax of new 'CO2 voodoo', [6]
whether you don't or do or won't
believe climate is caused by human want?

Poetic license is taken by Author [6] for distillation of this Request to first level 'ordinary words'.

"After all, legislation when not expressed in technical terms is addressed to the common run of men and is therefore to be understood according to the sense of the thing, as the ordinary man has a right to rely on ordinary words addressed to him." Frankfurter in *Addison v. Holly Hill Co.*, 322 U.S. 607, 618 (1944)

The phrase "whether you don't or do or won't believe climate is caused by human want" conveys basic, simple respect for different views by differing experts.

Neither Requester nor Author request any investigation or debate about whether there is global warming or whether any climate change is human caused or amplified. [6]

Instead, Requester asks Investigator to explore unethical intertwining of real pollution problems with political misuse by Pre-2017 Administration of environmental issues to cause improper potential taxation of liquid marine fuels and money transfers by the UN from "blindsided" USA citizen taxpayers. Requester submits mere potential of that taxation harms the environment by causing deferral of adoption of real technology solutions to certain types of pollution.

Any reader offended by 'CO2 voodoo' should see footnote [6].

B) Second down layer peel of onion = See any warning of marine taxation by the UN?

(i) Blind? or Blindsided? What does it matter anyway?

Requester submits respectfully that the 'ordinary' American taxpayer is

(a) blind or blindsided to potential taxation by the UN, and

(b) cannot see that Pre-2017 Administration has participated in enabling the UN to tax USA citizens contrary to pre-existing USA legal principles. [3][5B][5C][16]

(ii) Cannot see? Why? 'Ordinary words' have not been addressed to the USA citizen taxpayer. Requester asks OIG to investigate: Did Pre-2017 Administration clarify its participation in potential of UN taxation on marine transport?

One basic test: Prior reading this Request, did OIG reader (as a USA citizen taxpayer) see clearly and fully understand that USA citizen taxpayers are subject to risk of multi-Billion dollar tax (potential) by the UN [5] via the International Marine Organization (IMO) part of the UN? With significant tax money flows to other countries? [15, 16] All on an improper basis detailed below?

That is, the average USA citizen does not normally see, know about or fully appreciate benefits of IMO's excellent safety work BUT also the USA taxpayer does expect any IMO related tax risk. [16] In this investigation, OIG can find Billions of dollars of annual hidden potential tax burden that have not been properly flagged in 'ordinary words' to most USA taxpayers.

IMO deserves utmost respect. In shipping safety and other matters, historical IMO footprints are steps of highest integrity, placed with exceptional technical competence in IMO's normal safety arena, where IMO's actions are based on deliberate, conservative, well planned studies and careful technical considerations. Emissions "at sea" taxation steps would be new and different for IMO, and not expected by most USA taxpayers who would be blindsided.

(iii) "Wind of open sea?" Which way with the wind of marine taxation blow? Can one clearly see how the UN levy is determined? What basis? Who pays? Can one see which group or committee sets the tax levy? Upon whom is tax imposed, who collects and remits? Ship owners? Lessees? Flag States? Operators? Fuel producers? Distributors? Port Authorities? Country of export? Country of import? Who hears the USA citizen taxpayer voice in the greater wind? [17]

In particular, Requester asks Investigator if Pre-2017 Administration

(a) claimed via Endangerment [2] broad EPA jurisdiction to address interactions 'around the globe' and avoid a 'tragedy of commons'?

"...a tragedy of the commons, whereby no country or source category would be accountable for contributing to the global problem of climate change, and nobody would take action as the problem persists and worsens..." [2]

(b) BUT then participated in exclusion of global marine from the Paris Climate Agreement [3] [13][15] creating a 'tragedy of commons'? AND

(c) deferred to MARPOL [15] for open seas marine, leaving IMO to address the open seas 'tragedy of commons'? AND

(d) failed to "wave the flag", but instead obfuscated, critical issues of global UN taxation to those who might not readily see such tax issues, namely USA Courts [5(A)][15(J)] or others when Pre-2017 Administration had ample opportunities to do so?

(iv) "Human want"? Do USA taxpayers want multi-Billion dollar UN tax on marine fuel?

Is this a UN-determined tax on Americans filling 'global pockets' but not Americans [2][13][15]? If not, what is it? Do USA taxpayers have any say in what they want? Is the potential UN tax any of the following:

(a) Tax by improperly tangled web to capture global carbon tax and trade [15]?

(b) Tax by first an "action" of Pre-2017 Administration then followed by an "inaction" causing deferral to non-USA taxing authorities via

(1) Endangerment [2]

(2) Misuse of MARPOL for open seas marine taxation [15(I)(J)] and

(3) Paris Convention exclusion of open seas marine [13] resulting in tax revenues not flowing to the USA but instead to third parties?

(c) Tax strategy hidden by deceptive conduct of Pre-2017 Administration of EPA, where "tax" potential not expressly disclosed or otherwise flagged by EPA to the Courts in major cases or to other USA authorities? [5] [15, in particular 15(J)]

In summary, the above second layer asks Investigator whether "Tax the blind" USA citizen "on what they cannot see" (without regard to what they want) was an unethically planned action or an improper deferral (e.g. by Pre-2017 Administration looking away instead of properly acting).

C) Third down layer peel of onion = Incomplete basis? False echo?

Requester submits the following as one example of "CO2 voodoo" [6]; the following statement being so woefully incomplete from a chemical science viewpoint [6] that one might consider it despicable. Investigator may find that, in one form, it was "echoed" by many without basis and then misused by the Pre-2017 Administration. Please see 15(K). The below is an example believed to be an "echo" where source of original statement can not readily traced or attributed to any single person or group by this Author, but for other examples of 'echoes', please see all of [15(K)]. If not intended to be taken 'literally' versus 'figuratively', the concept was echoed as if factual.

A ship and a coal-fired power station may produce equivalent quantities of greenhouse gas, but while it is clear which country is responsible for a power station's emissions, a ship's emissions cannot be linked to any one country. A carbon price must therefore apply equally to all ships." [15(K)(a)]

Perhaps from a 'political science' viewpoint statements like that can be defended as addressing emissions during transit, but it is incomplete and thus 'dead wrong' and false or misleading from at least one 'chemical science' viewpoint, that is, from chemistry of the fuel source.

Again said with license for 'the Emperor has no clothes' says this naive to the echoes – Requester's response:

- A ship without fuel has no engine exhaust emissions.
- The ship's fuel is the primary source of exhaust emissions (whether or not scrubbed, passed over catalytic converters, or otherwise treated).
- Each ship's fuel mix can be linked to country(s) where each fuel was produced. [17]
- A "carbon price" (or tax) need not apply equally to all ships [15(K)][17] [18]

Instead of 'carbon price' applied equally to all ships, carrying all of the attendant potentials for abuse and tax funds diversions allegedly created or assented to by Pre-2017 Administration, perhaps (treat this please as an incomplete thought) the environment would be best protected if:

(0) "zero tax" applied to certified clean marine fuel [17], and

(1) a "weighted pollution penalty" applied to non-certified marine fuel in the country in which said putative fuel was produced, but remitted to various recipient countries to which the user ship delivered its various cargo while possessing the putative fuel. Emission reduction claims, such as defenses made in specific cases of mitigation offsets (e.g. scrubbers, catalytic converters, etc. installed and effective) can be addressed. See [17] for speculation on simple and fair processes to implement, which processes are deferred to applicable authorities.

Requester's above "dots" are reality distillates, save and except rare and de minimis situations or creative, complex holistic source accounting. [17(b)] Requester deals with current and

foreseeable technology reality checks until science other than political science innovates other new fuels.

Set aside the rare few commercial ships that do use only alternatives such as nuclear, solar, wind (going back to sail or wind turbines), onboard human (rowers) or animal energy, hydrogen from non-hydrocarbon sources, and the like. Set aside long promised yet unrealized adaptations of nuclear fission, fusion (hot or cold), or massive step-out battery technology.

Open and unashamed reality is that the vast majority of ships engaged in international transport are currently, and for the foreseeable decades will be, powered by 'hydrocarbon containing liquids, gases or solids'. That is, fueled by the loose term 'fossil fuels', generally known as forms or derivatives of crude oil, other heavy oils, natural gas (primarily in LNG form) and coal.

D) At the core of a possibly rotten onion = Failure to stand in front of responsibility?

In particular, Requester submits your investigation can question whether:

(1) Pre-2017 Administration failed to stand in front its responsibility as it asserted in Endangerment [2], instead

(a) lost scientific credibility by asserting authority in global arenas in which it had no practical way to regulate? [2][15(l)]

(b) lost scientific integrity, by deferring in such arenas to non-USA other parties, critical data collection, assessment and regulation that define major impacts on USA environment and economy? [3][7]

(c) lost scientific interface control as to significant environmental taxation of USA consumers and land based businesses by non-USA others? [3][8][15(A)-to-15(J)]

(2) Above D) (1) applies in particular to global marine? [9]

Requester respectfully requests you to investigate possible ethical violations ("EPA Fails(s)") to enable sanctions on participating and contributing violators.

"EPA Fail(s)" as used herein means *failure to stand in front of its responsibility which EPA itself defined*.

Core Questions for OIG:

#1. Did EPA fail to stand in front of its "*responsibility which EPA itself defined*"?

In 2009, Administration asserted

The impacts of the air over the United States cannot be assessed separately from the impacts from the global pool, as they occur together and work together to affect the climate...." [2]

By that assertion, 2009 EPA Administration thus represented to the USA public a "global" construct of EPA's responsibility and authority, "not an isolated" domestic one [2].

The Nation's air resources by definition are not an isolated atmosphere that only contains molecules emitted within the United States, or an *atmosphere that bears no relationship to the rest of the globe's atmosphere*. There is no such real world body of air.

Ignoring the real world nature of the Nation's air resources....would involve the kind of unworkable, incremental, and artificially isolating approach that was rejected by the court in *Ethyl* and by Congress in 1977. [2]

#2. Did EPA abstain to enable contrary development of an "unworkable, incremental and artificially isolating approach"?

Did 2009 EPA stake deed to the territory of global open sea marine impact on USA [2] to enable exclusion of such from Paris Agreement [3] by participation of Pre-2017 Administration?

Thus, was an "artificially isolating approach" for open sea marine and 'tragedy of commons' created by leaving open sea marine out of the Paris Agreement?

Was this is a major ethical EPA Fail of Pre-2017 Administration? Was it ethical to enter Paris Agreement knowing that USA Congress had not ratified long outstanding Kyoto Protocol from which the Paris Agreement follows for a marine exclusion?

#3. Did failure to act or improper deferrals occur with knowledge of critical harm to USA environment?

OIG may find 2009-to-2016 ethical issues clearly arise because EPA knew of "significant" 'open sea' marine issues but failed to act quickly and promptly or improperly deferred to others.

Because of their reliance on petroleum-based fuels and their dramatic growth rates in recent decades, air and sea transport are responsible for significant emissions of traditional (criteria) air pollutants (e.g. sulfur oxides (SOx), nitrogen oxides (NOx)) and greenhouse gases such as carbon dioxide (CO2) and other pollutants. [10]

The IMO found that *international shipping contributes about 13% and 12% of annual global NOx and SOx emissions,contributed an average of 2.6% of global annual CO2 emissions2007 – 2012. (The figure for 2012 was 2.2%.)* [10]

2009-to-2016 era "significant" marine environmental issues (including reports of attributed deaths) were published fairly widely in non-technical literature, again confirming OIG need to review ethics Policy [4] considerations for Pre-2017 EPA Administration. [11]

Various early publications include:

"Pollution from ships causing thousands of deaths...sulphur particles from ships may be responsible for as many as 60,000 deaths a year, say US scientists..."

"Health risks of shipping pollution have been 'underestimated...just 15 of the world's biggest ships may now emit as much pollution as all the world's 760 Million cars...."

"Shipping Impacts On Climate: A Source With Solutions...ocean-going vessels released 1.12 billion metric tons of carbon dioxide in 2007... over three percent of global anthropogenic carbon dioxide emissions and...growing [11]

2011 Lloyd's Register report indicated significant global marine 2050 CO2 emissions growth if "business as usual" (BAU) without mitigations, up to 290% (high global economic growth) or about 180% (in certain low growth scenarios). [12]

2014 EPA confirmed key marine issues by reference to "science of others" stating that "international shipping contributes about 13% and 12% of annual global NOx and SOx emissions" and "an average of 2.6% of global annual CO2 emissions from the combustion of fossil fuels during the period 2007 – 2012" [10].

If marine SOx and NOx are at about 12 or 13% levels and CO2 at much lower 2 or 3%, on balance, what is proper "first focus" for improvement when there is interaction with land based emissions? [17] Is improper CO2 tax and trading an unethical diversion if it distracts from 'right versus wrong' first focus? [6]

#4. Did specific failure to act cause critical harm to USA environment?

What happened to 'open seas' impact on USA during 2009 to 2016? EPA Fail? [2][10]

Pre-2017 Administration endorsed Paris Agreement but allowed exclusion of open seas.[13]

A significant feature of the Paris Agreement is that virtually all of the world's nations, including developing countries, *have made Intended Nationally Determined Contributions (INDCs)* setting out commitments to reduce CO2 emissions *which will be updated every 5 years*.

However, international shipping is not covered by these INDCs...[3][14][15]

Let that "sink" (in mental, not nautical context) and then please test against Endangerment assertions [2]

Echo the above cited 2014 EPA confirmation of EPA knowledge that:

"international shipping contributes about 13% and 12% of annual global NOx and SOx emissions" and "an average of 2.6% of global annual CO2 emissions from the combustion of fossil fuels during the period 2007 – 2012" [10]

then again echo

"... *international shipping is not covered...*" [3][15]

#5. Did improper deferrals cause critical harm to USA environment?

To whom is deferral made? Who approved? Congress? President? EPA Administrator?

However, international shipping is not covered by these INDCs.....
with the reduction of shipping's CO2 being the responsibility of the industry's global regulator, the International Maritime Organization (IMO). [3][13][14]

If above context is correct, is deferral inconsistent with Endangerment global assertion [2] by Pre-2017 EPA Administration?

Did Pre-2017 Administration establish who is responsible for?

- (i) data collection, assessment and regulation based thereon?
- (ii) computation of emissions?
- (iii) computation of marine tax levies?
- (iv) collection of marine taxes?
- (v) distribution of marine taxes?
- (vi) encouraging marine environmental innovations by enforcing patent rights? [20]

Background tests to aid in your OIG investigation - areas of core investigation:

One first test:

Was the Pre-2017 Administration "grab for global" (for example 2009 Endangerment [2]) an unethical facade post Kyoto Protocol [15(B)]?

That is, given that the Pre-2017 Administration knew of the 1995 UNFCC processes [15(A)] and 1997 Kyoto Protocol [15(B)] for global marine, did the Pre-2017 Administration use the 2009 "grab for global" to

a) shift 'fair share' maritime shipping cost increase burdens away from large manufacturing/exporting countries to large importing countries (for example USA domestic consumers). See proposal *"In the same way that the INDCs under the Paris Agreement cover GHG reductions for entire national economies, a fair share contributed by IMO should be made on behalf of the international shipping sector as a whole."* [16]?

b) direct massive future marine fuel tax revenues (proposed "global levy based on fuel consumption") [16] away from USA domestic taxing entities toward accounts of international environmental entities (UNFCC via IMO) as "fair share' UNFCC contributions?

c) create economic disincentives for those who develop new USA technologies for production of alternative future marine fuels? [1][20]

Second test:

Was Pre-2017 Administration delegation or deferral authority over impact on marine environmental (perhaps to UNFCCC, SBSTA, IMO, shipping industry consortia, others?) appropriate and ethical under these facts post Kyoto Protocol? [15(A)-to-15(H)]

a) should Pre-2017 Administration expect US Public to rely upon pre-2017 EPA to "stand in front of responsibility" as to 2009 EPA "global assertion" [2].

b) if "yes", to a) did Pre-2017 Administration action or inaction commit fraud upon the USA Public by inconsistent arrangements made with, or deferrals to, other non-domestic entities post Kyoto Protocol (for example, UNFCCC, SBSTA, IMO, shipping industry consortia, others?) to:

(i) exclude global marine impact on US from Paris Agreement (versus demanding inclusion) for other than temporary matters, when such non-temporary arrangements are not binding?; or

(ii) fail to act for global marine by deferrals to others of essential responsibilities for impact on US entities, whereby domestic conduct became regulated by others [15][18]?; or

c) did Pre-2017 Administration lose "scientific integrity" for marine by hiding EPA responsibility for open seas integration behind various non-EPA entities? [15(A)-to-15(H)]

Third Test

Did Pre-2017 Administration support a "scientifically artificial" construct in Endangerment [2] merely to enable Paris Climate exclusion [3] of global marine contrary to Endangerment [2], where Endangerment stated:

The suggested (third party) narrow view of "air pollution" does not further the protection of the Nation's air resources, but instead attempts to limit such protection by defining these resources in a scientifically artificial way that does not comport with how the air in the atmosphere is formed or changes over time, how it relates to and interacts with air around the globe, and how the result of this can affect the U.S. population.

The 2009 Endangerment [2] condemned exclusions as "picking and choosing" as follows:

"Moreover, the Administrator is not "picking and choosing" when she applies a global or domestic approach in these Findings. Rather, she is looking at both of these emissions comparisons as appropriate under the applicable science, facts, and law." [2]

Is the foregoing properly asserted? To be clear, Requester's query is whether OIG may consider if Pre-2017 EPA Fails violated the Scientific Integrity Policy by "picking and choosing" contrary to 2009 global assertion in a manner to exclude, or defer responsibility to others, global open seas marine that impacts USA domestic operations and taxation.

Fourth Test

Did Pre-2017 Administration trigger ethical issues when Administration acted or deferred acting for other than temporary matters, by 'making arrangements' with international parties which are not binding except with Senate ratification. [18]

'Making arrangements' includes tacit agreement, by course of conduct or lack of acting, for deferral of Administration action or inaction, for example, deferral of EPA claimed 'global authority' to others.

OIG is asked to be mindful of statements such as the following

"While reference to a maritime fuel levy was deleted from the final text of the Paris Agreement, in January 2016 the International Monetary Fund (IMF) repeated its call for a carbon tax to be imposed on shipping at a level of about US\$ 95 per tonne of fuel. A similar proposal was made in 2015 by the Organisation for Economic Co-operation and Development (OECD) International Transport Forum" [16]

Can OIG interpret the August 2016 "shipping industry co-sponsors" submission [15(H)(2)] to mean that shipping industry co-sponsors have Pre-2017 Administration 'tacit agreement' for IMO to:

- (i) follow Paris Agreement wording otherwise applied to contributions that governments will make as Intended Nationally Determined Contributions (INDCs) and
- (ii) then apply same to marine, and
- (iii) as apply such as an entire sector, but
- (iv) determine "fair share" by an adjustment based on 'real world' realities such as lack of alternative fuel technology and balanced with land based issues, and
- (v) place levy on fuels (not ships, not goods, etc.),
- (vi) collect the taxes and flow them, instead of to USA, to UNFCCC, IMO or elsewhere,
- (vii) increase INDC burden on USA fuel manufacturers whose assets might produce more CO₂ to reduce levels of other marine contaminants such as sulfur and metals?

Your OIG investigation might conclude that the Pre-2017 Administration 2009 global assertion [2] and subsequent inaction was a facade: EPA claimed empowerment in extraterritorial waters and air in order to divert to others, to wit, others who have no authority over USA domestics yet seek to impact them or receive tax monies from them.

Your OIG investigation can address additional related inquiries such as:

Did 2009 EPA have legal basis, in view of 1997 Kyoto Protocol [15(B)] rejection by non-ratification in USA prior to Paris Agreement, to honestly believe EPA had a 2009 "open seas" authority against non-domestic others?

If not, why did global assertion occur in Endangerment [2]?

What could be more global than global marine (except aviation not addressed here)[9]?

Was the assertion "genuine and ethical" or "political and manipulative", being contrary to long established legal principles? [5][18]

Did 2009 EPA assert broad authority merely to exclude other domestic authorities, only later in 2016 to give or defer authority to non-domestic others [15(A)-to-15(H)]?

Was that deferral knowingly done to cause harm by adverse impact against domestics who seek to develop and offer technology for cleaner fuels?

Who will determine "what is a fair share" for domestics to contribute?

Will fair share be a "global tax" levied upon domestic fuel producers such as prospective licensees of Requester's technology? Will that adversely impact values?

Why defer to others (non-USA entities) to tax fuel consumption, when that penalizes improved fuels, with significantly lower emissions than traditional heavy fuel oils?

Why not tax based on amount of pollution produced by the ship firing dirty versus clean fuels or using exhaust scrubbers, many of which merely move pollution from exhaust air to pollute seas? [16]

Did Pre-2017 Administration "leading experts" [19] act or fail to act with knowledge that:

(a) when IMO dropped sulfur content of marine fuels for open seas from 3.5% to 0.5%, in conventional processes for removing sulfur from liquids, most conventional land based processes for production for fuel (gas, liquid or solid) would increase CO2 emissions?

(b) in the event of (a), is CO2 impact is shifted from open seas to land INDCs [3]?
If so, with such knowledge, was it ethical to allow such burden shift to occur without Administration push back and adjustment to protect domestic USA residents, technology developers and producers? For example, Requester contends its patent pending [20] processes for clean marine fuels may emit relatively low levels of CO2, e.g. about 50% less than conventional liquid fuel production processes and substantially avoid methane slippage.

In view of the foregoing, OIG may appreciate Requester's standing, as alternative liquid marine fuel technology developer, to request investigation of personnel supporting possible Pre-2017 Administrative EPA Fails that do not properly address marine emissions.

Closing:

Requester contends that an improved environment can be obtained by reducing major emissions "on open seas" of sulfur, nitrogen and metals containing pollutants, as a first priority.

Requester contends that priority was diverted by the Pre-2017 Administration. OIG may find that Pre-2017 Administration EPA Fails, whether by misplaced or hidden global UN marine fuel tax or CO2 trading schemes, unethically obfuscated potential taxation in a manner that currently distracts from implementation of above basic priority environmental improvements.

This submission is made as a good faith request to lead to required clarity of "opened eyes" vision but this Request is itself not complete or perfect due to limited resources of the Requester.

Respectfully submitted,
Mawetal LLC
by its Agent and Attorney-in-fact

/s/Tom F. Pruitt
Tom F. Pruitt

FOOTNOTES

[1] MAWETAL LLC (Requester) is a private, for profit, developmental stage company formed in 2016 to develop 'a new subclass' of step-out clean liquid fuels. Requester's focus is 'fuel' for marine and land based combustion gas turbines (CGT) and reciprocating, rotary and other engines, primarily for marine and power generation applications. Requester is solely funded by its two individual member chemical engineers and has not received promise of funding or technology from any third party, whether within or outside marine, CGT, or hydrocarbon industries or from governments or from any part of any nonprofit or political group.

Opinions of Requester or its members are their own, and do not include inputs or suggestions of past or present employers, partners, or associates or other organizations, who may take contrary positions or reach different conclusions. No person or entity other than Requester asked for preparation or submission of this Request, nor provided input to its preparation.

To be clear, as set forth in the main body, this Request is a blatant demand for investigation as to whether EPA ethics Policy [4] proscribes Pre-2017 Administration 'action, or inaction or deferral to others to act' that obfuscated risk of potential UN global taxation of marine fuels which should have been reasonably anticipated by Pre-2017 Administration and which could have a material impact on introduction of innovative solutions to pollution such as Requester's new fuels.

Akin to taking 'all cars worldwide' off the road, many times over [11, see early Guardian article], Requester in good faith contends it has standing and need to make this Request. That is, Requester contends its new subclass patent pending marine fuel [20], if fully vetted and commercialized at its optimum compositions, could reduce annual SOx pollution by global commercial shipping, compared to 2005-2015 era annual actual, equivalent to removing all cars worldwide 'off the road', multiple times. Such emissions' reduction would be consistent with, but exceeding, IMO (International Marine Organization) 2020 sulfur reduction requirements of October 2016. Please see graph at last page.

Current majority of commercial transport vessels with large propulsion engines (EPA assigned 'C3' class) operate at seas on high-sulfur, heavy fuel oil (HFO or HSFO) also generally known as residual or bunker fuel, which HFO could be replaced in an environmentally friendly manner by new fuel (such as Requester's fuel which is not current marine diesel MDO or gas oil MGO), with adapted engine systems consistent with SOLAS (Safety of Life at Sea) criteria. Requester's newly developed subclass of fuel design has ECA compliant sulfur levels but is novel and unique if considered within 40 CFR 80.2(ttt) ECA marine fuel.

Without tax certainty needed by Requester, the risk of major investments in producing innovative new classes of fuel may be unacceptable. For example, what if 'dirty higher sulfur fuels' supplied by other countries produced with adverse processes generating 'higher CO2 levels' during production are subject to mere "simple global levy based on fuel consumption" [16][17] and are taxed at same global tax rate as are Requester's very clean, very low sulfur and metals fuel? What is the answer? No one knows? How then does one plan continuing developments and innovations commercialization? Again, please see graph at last page.

[2] Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 40 CFR Chapter I [EPA-HQ-OAR-2009-0171; FRL-9091-8] RIN 2060-ZA14, Federal Register/Vol. 74, No. 239/Tuesday, December 15, 2009/Rules and Regulations, pages 66495 to 66546

<https://www.gpo.gov/fdsys/pkg/FR-2009-12-15/pdf/E9-29537.pdf>

"As discussed in the Proposed Findings, no single greenhouse gas source category dominates on the global scale, and many (if not all) individual greenhouse gas source categories could appear small in comparison to the total, when, in fact, they could be very important contributors in terms of both absolute emissions or in comparison to other source categories, globally or within the United States. If the United States and the rest of the world are to combat the risks associated with global climate change, contributors must do their part even if their contributions to the global problem, measured in terms of percentage, are smaller than typically encountered when tackling solely regional or local environmental issues. The commenter's approach, if used globally, would effectively lead to a tragedy of the commons, whereby no country or source category would be accountable for contributing to the global problem of climate change, and nobody would take action as the problem persists and worsens. The Administrator's approach, on the contrary, avoids this kind of approach, and is a reasonable exercise of her discretion to determine contribution in the global context in which this issue arises. "

[3] Paris Agreement, Climate

http://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf in which "Convention" means the United Nations Framework Convention on Climate Change, (UNFCCC) adopted in New York on 9 May 1992

[4] EPA Scientific Integrity Policy

https://www.epa.gov/sites/production/files/2014-02/documents/scientific_integrity_policy_2012.pdf

Requester understands that Second paragraph Section III Policy Applicability of the Scientific Integrity Policy recites:

"It does not create any obligation, right or benefit for any member of the public, substantive or procedural, enforceable by law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees or agents, or any other person."

[5] Underlining, italics and/or deletions forming short extracts are used in various certain quotations to add emphasis. Certain quotes are out of order and are extracts - not to deceive, but to point out prior potential deceit by use of 'stand-alone context'. Investigator is asked to read in entirety of all cited references from which quotations were taken. Citing a particular reference (whether web link or other) does not imply Requester's endorsement of same.

This summary (like other portions of this Request) sacrifices completeness on the altar of brevity. This Request can only distill salient history to form one outline design for an OIG crucible to test by imposing high temperature forging for 'medals of ethics' or 'labels for fails'.

[5](A) For Pre-2017 Administration scope of disclosures, without express mention of taxation, please see "Brief In Support Of Defendants' Motion To Alaska's Motion For Preliminary Injunction"

<https://www.state.gov/documents/organization/211890.pdf> and Order Re All Pending Motions,
Alaska et al. v. Clinton, Kerry et al. 3:12-cv-00142-SLG,
972 F.Supp.2d 1111 (2013)

[5](B) Prior USA Law

<http://uscode.house.gov/statutes/pl/105/118.pdf>

111 STAT. 2428 PUBLIC LAW 105-118 NOV. 26, 1997

RESTRICTIONS ON VOLUNTARY CONTRIBUTIONS TO UNITED NATIONS AGENCIES

SEC. 564. (a) PROHIBITION ON VOLUNTARY CONTRIBUTIONS FOR THE UNITED NATIONS. None of the funds appropriated or otherwise made available by this Act may be made available to pay any voluntary contribution of the United States to the United Nations (including the United Nations Development Program) if the United Nations implements or imposes any taxation on any United States persons.

(b) CERTIFICATION REQUIRED FOR DISBURSEMENT OF FUNDS.— None of the funds appropriated or otherwise made available under this Act may be made available to pay any voluntary contribution of the United States to the United Nations (including the United Nations Development Program) unless the President certifies to the Congress 15 days in advance of such payment that the United Nations is not engaged in any effort to implement or impose any taxation on United States persons in order to raise revenue for the United Nations or any of its specialized agencies.

(c) DEFINITIONS. As used in this section the term "United States person" refers to—
(1) a natural person who is a citizen or national of the United States; or (2) a corporation, partnership, or other legal entity organized under the United States or any State, territory, possession, or district of the United States.

[5](C) concerns expressed in Bill pending before Congress (at March 30, 2017)

<https://www.congress.gov/bill/115th-congress/house-bill/1835/text?r=130>

Extracts of Pending H. R. 1835 MARCH 30, 2017 115TH CONGRESS 1ST SESSION entitled "To prohibit United States voluntary and assessed contributions to the United Nations if the United Nations imposes any tax or fee on any United States person or continues to develop or promote proposals for such a tax or fee."

SEC. 2. FINDINGS. (again extracts)

(3) United Nations officials have made numerous and repeated proposals to provide financing for the United Nations outside the scrutiny of member states of the United Nations, includingimposing taxes on an extensive range of transactions, goods, and services;

(9) the power to tax is an attribute of sovereignty;

(10) the United Nations does not have the attributes of sovereignty and is not a sovereign power; and

(11) the United Nations has no legal authority to impose taxes on United States citizens.

SEC. 3. PROHIBITIONS REGARDING TAXATION ...

(a) The United States shall not pay any voluntary or assessed contribution to the United Nationsif the United Nations(1) attempts to implement or impose any taxation or fee on any United States person; or

(b) The United States shall not pay any voluntary or assessed contribution to the United Nations or any of its specialized or affiliated agenciesunless the President certifies in writing to Congressthat the United Nations or any of its specialized or affiliated agencies is not engaged in any effort to develop, advocate, promote, or publicize any proposal concerning taxation or fees on any United States person in order to raise revenue for the United Nations or any of its specialized or affiliated agencies....

(2) The term ``taxation or fees on any United States person`` includes any tax or fee assessed against any United States person on a per capita basis or on a transaction or user basis, including any tax or fee on international air travel, foreign exchange transactions, the mails, or extraction or use of natural resources.

pdf at <https://www.congress.gov/115/bills/hr1835/BILLS-115hr1835ih.pdf>

[6] Repeat to be clear: Neither Requester nor Author request an investigation or debate about whether there is global warming or whether any climate change is human caused or amplified.

Instead, Requester asks Investigator to explore unethical intertwining of real pollution problems with political misuse by Pre-2017 Administration of environmental issues to cause, improper potential taxation of liquid marine fuels and money transfers by the UN (United Nations) from "blindsided" USA citizen taxpayers.

Author respectfully submits Investigator may see an analogy here: In the early 1900's, a Texas County Sheriff was dispatched to investigate the case of a 'voodoo doctor' who allegedly defrauded a lady of her hard earned monies with a false cure for imagined issues. Said Sheriff was Author's Great-granduncle. So 'be mindful of government interventions': <http://www.texasbarcle.com/Materials/Events/12716/161726.pdf>, complete paper available from Texas State Bar IP Section.

"Tax of new CO2 voodoo", a phrase minted by Author to conjure sounds of the roar of snowflakes melting, may offend certain "expert" readers [19] or those involved in Pre-2017 Administration [2] or Paris climate accord [3] or others whose activities may knowingly or unwittingly, directly or indirectly support improper CO2 tax or trading related issues, like those suggested by the following article, which is merely echoed, not verified by Requester: <http://www.dailymail.co.uk/home/moslive/article-1188937/The-great-carbon-credit-eco-companies-causing-pollution.html>.

If offended, good – the phrase is made as hyperbole of the 'misused misunderstood' – because neither improper taxation nor diversion of funds based on CO2-related claims is technical innovation. Even 'innovatively, creatively, cleverly obfuscated taxation' is not technical innovation, nor is related creatively hidden diversion of tax flows. For others, Author has an open mind to respect all faiths and religions and does hereby extend a sincere apology to any offended person whose freedom of faith or religion choice include aspects of 'voodoo', however defined, believed, worshipped or practiced, yet accept please, that 'CO2' does not rhyme with 'faith' or 'religion'.

However, readers who contend all measures, whether unreasonable or not, should be used to reduce CO2 emissions but have no chemistry-driven technical solutions as how to do so, please consider holding your breath, lest you add to CO2 levels.

That is, protest without chemical analysis and echo [15(J] but don't exhale, instead hold your breath while others exhale and work on chemistry-driven solutions to pollution to address basic concerns: http://www.who.int/phe/health_topics/outdoorair/databases/cities/en/
<http://m.hindustantimes.com/delhi/four-out-of-top-five-polluted-cities-are-in-india-delhi-not-among-them/story-Gn2htcLbESB3BpeYJ4mY8K.html>

Offended? Author's 'don't exhale' request may offend. Good - it is likewise made as hyperbole. If instead you were insulted and elected to exhale and protest but not work on chemistry solutions, you may elect to pay taxes for breathing while others do not so pay. That 'paying while others don't so pay' is the type of situation that Requester complains in Request is ripe for investigation.

Author again submits Investigator will see an analogy 'in paying while others do not so pay' as follows: No matter of how 'well meaning' it may be for some subset of persons to impose marine fuel taxes on other persons, disrupt adaptation of anti-pollution technologies and use those tax levies to provide financial support to developing countries, those taxed to provide that third party support should know about the taxation in sufficient detail to enable having an informed voice to be heard by their elected officials.

Taxpayers should be fully informed of the basis for taxation and other details of tax revenue transfers to third parties (e.g. avoiding misuse by recipients, where otherwise abuse potential may be great), otherwise Investigator can find the Pre-2017 foundation activities to be corrupt by UN standards. See for example: See standards in UN Convention Against Corruption. *Article 17. Embezzlement, misappropriation or other diversion of property by a public official.* Each State Party shall adopt such legislative and other measures as may be necessary to establish as criminal offences, when committed intentionally, the embezzlement, misappropriation or other diversion by a public official for his or her benefit or for the benefit of another person or entity, of any property, public or private funds or securities or any other thing of value entrusted to the public official by virtue of his or her position. Investigator is asked to test activity by Pre-2017 Administration to determine if such contributed to improper diversions or their potential.

<https://www.unodc.org/unodc/en/treaties/CAC/>

[7] "Reducing Air Pollution from International Transportation"

<https://www.epa.gov/international-cooperation/reducing-air-pollution-international-transportation>, citing Third IMO GHG Study 2014; International Maritime Organization (IMO) London, UK, June 2014; T.W. P. Smith et al.

Outside the box 'step-out' chemistry driven solutions significantly reducing various sector emissions by 'real science' are not obvious. Current specific effective technology picks may not exist beyond the obvious 'low hanging fruit'. Certain coastal or harbor uses of 'exhaust scrubbers', for example, may merely capture undesired exhaust contaminants and place them in shallow seas, conjuring up images of 'don't eat the sushi' considerations.

See for example,

(i) <http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Gre-enhouse-Gas-Studies-2014.aspx>

(ii) <https://www.epa.gov/sites/production/files/2015-12/documents/refineries.pdf>

[8] For an excellent early 1998 era assessment pioneering work, please see EPA's, Bruss and Barbour "Greenhouse Gas Emissions from Aviation and Marine Fuel Use"
<https://www3.epa.gov/ttnchie1/conference/ei10/ghg/barbour.pdf>
but see [10] below.

[9] Requester's focus is global marine, yet certain queries and citations herein may also apply to global aviation whilst aviation is not the focus of this Request.

[10] 2014 EPA reference, as an example of EPA deferral of marine data of others:
The IMO found that *international shipping contributes about 13% and 12% of annual global NO_x and SO_x emissions*, respectively, from anthropogenic sources reported in the latest IPCC Assessment Report (AR5). This sector contributed an *average of 2.6% of global annual CO₂ emissions* from the combustion of fossil fuels during the period 2007 – 2012. (The figure for 2012 was 2.2%.)

Reducing Air Pollution from International Transportation

<https://www.epa.gov/international-cooperation/reducing-air-pollution-international-transportation>, citing Third IMO GHG Study 2014; International Maritime Organization (IMO) London, UK, June 2014; T.W. P. Smith et al.

[11] Examples of well known non-technical literature about open seas pollution, published before Pre-2017 Administration action or inaction

2008 "Pollution from ships causing thousands of deaths". Sulphur particles from ships may be responsible for as many as 60,000 deaths a year, say US scientists
...
<https://www.theguardian.com/environment/2008/aug/19/pollution.usa>

2009 "Health risks of shipping pollution have been 'underestimated'"
.....fuel typically used by ships and cars shows that just 15 of the world's biggest ships may now emit as much pollution as all the world's 760m cars...."
<https://www.theguardian.com/environment/2009/apr/09/shipping-pollution>

2009 "Pollution from ships causing thousands of deaths"
With an estimated 800 million cars driving around the planet, that means 16 super-ships can emit as much sulfur as the world fleet of cars.
<http://www.dailymail.co.uk/sciencetech/article-1229857/How-16-ships-create-pollution-cars-world.html#ixzz4aMHmVhPj>

2008 "Shipping Impacts On Climate: A Source With Solutions"
"...ocean-going vessels released 1.12 billion metric tons of carbon dioxide in 2007... equivalent to the annual greenhouse gas emissions from over 205 million cars....Shipping is responsible for over three percent of global anthropogenic carbon dioxide emissions, and is growing.
Ellycia Harrould-Kolieb July 2008
http://www.cleanshipping.org/download/Oceana_Shipping_Report1.pdf

[12] Selected quote from Lloyd's publication:

"A simulation model, designed specifically to account for the uptake of emission reduction technologies and measures and the implementation of regulations to control emissions, has been used to predict likely CO2 emission levels to 2050.... indicates the international shipping's total annual CO2 emissions in 2050 of around 3200 million tonnes for BAU [business as usual but high growth] and a total annual CO2 emissions in 2050 of around 2000 million tonnes for BAU [low growth]{Ref: Para 4.11 and 5.10}.

Assessment of IMO Mandated Energy Efficiency Measures For International Shipping , Estimated CO2 Emissions Reduction From Introduction Of Mandatory Technical And Operational Energy Efficiency Measures For Ships , Project Final Report, 31 October 2011 http://schonescheepvaart.nl/downloads/rapporten/doc_1362490668.pdf

[13] UNFCCC Comment re Paris Agreement

"In accordance with the IPCC Guidelines for the preparation of greenhouse gas (GHG) inventories and the UNFCCC reporting guidelines on annual inventories, emissions from international aviation and maritime transport (also known as international bunker fuel emissions) *should be calculated as part of the national GHG inventories of Parties, but should be excluded from national totals and reported separately. These emissions are not subject to the limitation and reduction commitments of Annex I Parties under the Convention and the Kyoto Protocol.*"

http://unfccc.int/methods/emissions_from_intl_transport/items/1057.php

[14] Reducing CO2 - Acting on the Paris Agreement

[http://www.ics-shipping.org/key-issues/all-key-issues-\(full-list\)/reducing-co2---acting-on-the-paris-agreement](http://www.ics-shipping.org/key-issues/all-key-issues-(full-list)/reducing-co2---acting-on-the-paris-agreement) Note re INDC by ICS

ICS, International Chamber of Shipping

"ICS is the principal international trade association for merchant shipowners and operators, representing all sectors and trades and over 80% of the world merchant fleet."

<http://www.ics-shipping.org>

[15] Who is responsible for environmental taxation of global marine? History?

15 (A) 1995 - March/April "UNFCCC processes" and SBSTA

"Emissions from fuel used for international aviation and maritime transport have been addressed under the United Nations Framework Convention on Climate Change (UNFCCC) process since the first meeting of the Conference of the Parties (COP).

At its first meeting in 1995 (Berlin, Germany, March/April 1995), the COP requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) to address the issue of allocation and control of emissions from international bunker fuels and to report on this work to COP 2).

Decision 4/CP.1 Methodological issues

1.(f) That the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation, taking fully into account ongoing work in Governments and international organizations, including the International Maritime Organization and the International Civil Aviation Organization, address the issue of the allocation and control of emissions from international bunker fuels, and report on this work to the Conference of the Parties at its second session.

Framework Convention on Climate Change , FCCC/CP/1995/7/Add.1 6 June 1995

Report Of The Conference Of The Parties On Its First Session, Held At Berlin From 28 March To 7 April 1995, 10th plenary meeting 7 April 1995
Addendum, Part Two: Action Taken By The Conference Of The Parties At Its First Session, Decision 4/CP.1 Methodological issues. page 15
<http://unfccc.int/resource/docs/cop1/07a01.pdf#page=15>
http://unfccc.int/methods/emissions_from_intl_transport/items/1057.php
http://unfccc.int/methods/emissions_from_intl_transport/items/6142.php

15(B) 1997 Kyoto - the Parties and IMO?

[special note by Requester: UNFCCC records reflect that USA 'signed' but did not specifically ratify Kyoto Protocol]

1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) treated emissions of GHG from marine bunker fuels and aviation fuels differently than ground based GHG sources.

Article 2.2 The Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively.

Article 2.2: Aviation and marine bunker fuels

http://unfccc.int/essential_background/kyoto_protocol/items/1678.php

In addition the Kyoto Protocol addresses emissions from fuel used for international aviation and maritime transport in its Article 2, paragraph 2. Article 2.2 of the Kyoto Protocol states that the Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gas emissions not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO), respectively.

http://unfccc.int/methods/emissions_from_intl_transport/items/1057.php

History

113. Provisions concerning policies and measures to address aviation and marine bunker fuels, including specific reference to the role of ICAO and IMO, were included in the proposals from the EU and New Zealand. Switzerland's proposal also made reference to aviation emissions and ICAO. The proposals from both the EU and Switzerland included the possibility of taxation, while New Zealand's proposal simply covered "the development of policies and measures".

114. A substantively similar paragraph was included as part of the list of priority areas put forward by Chairman Estrada in his CNT. It was then incorporated as one of the policies and measures listed in Alternative B (EU) in the RTUN, with some important modifications. The paragraph was redrafted to refer to "limitation or reduction of emissions" to be undertaken by Parties, "through ICAO and IMO" (*rather than just cooperation with those organizations*), and new language was included on "introducing aviation fuel taxation". The paragraph did not appear, however, in CRP.2. As part of a compromise package on bunker fuel emissions, the provisions were reintroduced in CRP.4 as a stand-alone paragraph, using the word "shall", rather than as part of the optional list in subparagraph 1(a). The reference to introducing taxation, however, was deleted.

115. A second component of this compromise package was the addition of a provision in decision 2/CP.3 (methodological issues related to the Kyoto Protocol) *urging the SBSTA to further elaborate on the inclusion of emissions from bunker fuels in the overall greenhouse gas inventories of Parties*²⁰. This provision was proposed by Switzerland (see Article 5

below).

TRACING THE ORIGINS OF THE KYOTO PROTOCOL: AN ARTICLE-BY-ARTICLE TEXTUAL HISTORY, Technical paper, Prepared under contract to UNFCCC by Joanna Depledge August 1999/August 2000
<http://unfccc.int/resource/docs/tp/tp0200.pdf>

15(C) 1998 - November - MEPC of IMO?

24. The Marine Environment Protection Committee (MEPC) of IMO, at its 42nd session (2 to 6 November 1998), agreed to invite the secretariat of IMO to undertake a study concerning greenhouse gas emissions from ships. It will include the current status of greenhouse gas emissions from ships, as well as short- and long-term measures for the reduction of emissions. The report will be available for the 44th session of the MEPC in March 2000. The outcome of the study will form the basis for the MEPC's considerations and development of a policy document on greenhouse gas emissions from ships, which should be forwarded to the secretariat of the UNFCCC.

<http://unfccc.int/resource/docs/1999/sbsta/inf04.pdf>

15(D) 1999 - May/June SBSTA request to IMO and to the Parties?

Further, on the basis of document FCCC/SBSTA/1999/INF.4, the SBSTA noted that the data on emissions from international bunker fuels provided by Annex I Parties are often incomplete and inconsistent, it noted that further methodological work is needed to ensure consistent and transparent inventories. In this context, the SBSTA requested ICAO and IMO to provide data and expertise on the issue and requested Annex I Parties to provide, in a transparent manner, emission data and information on methods used to estimate emissions. The SBSTA invited the secretariat to explore ways to further strengthen the exchange of information between ICAO, IMO and the SBSTA.

SBSTA 10, Bonn, Germany, May/June 1999

http://unfccc.int/methods/emissions_from_intl_transport/items/6142.php

The SBSTA noted the role of ICAO and the International Maritime Organization (IMO) in addressing the control of international bunker fuel emissions, and the opportunity for Parties to work through these bodies. The SBSTA encouraged Parties to report emissions from international aviation and marine bunker fuels as two separate entries in their national communications, in accordance with the revised 1996 IPCC guidelines" (FCCC/SBSTA/1996/20, para. 55).

<http://unfccc.int/resource/docs/1999/sbsta/inf04.pdf>

12. Furthermore, complex relationships may exist in the shipping as well as in the aviation sector. These may affect data on fuel use. A ship, for example, may be owned by a company in one country, which itself is owned by other companies in another country, registered in a third country, operated by a ship-management company in a fourth country and crewed from a manning agency in a fifth country with nationals from other countries. Furthermore, carriage may be paid for by charterers, and in some cases a number of sub-charterers, based in other countries.

Footnote 1 of segment. II.B It would be up to the Parties to determine whether, and if so when, the inclusion of international bunker fuels into national totals would affect "assigned amounts" as defined in Article 3 of the Kyoto Protocol. If emissions from international bunker fuels were included in the base year and the "assigned amounts" of Parties, and if bunker emissions were to increase faster or decrease slower than the emissions from other sources, it would make it more difficult for Parties to meet their

commitment under the Kyoto Protocol. Conversely, if bunker emissions were to increase slower or decrease faster than the emissions from other sources, it would make it easier for Parties to meet their commitment under the Kyoto Protocol.

<http://unfccc.int/resource/docs/1999/sbsta/inf04.pdf>

15(E) 2014 - IMO as global regulatory body?

"In 2011, IMO adopted a suite of technical and operational measures which together provide an energy- efficiency framework for ships. these mandatory measures entered into force as a 'package' on 1 January 2013, under Annex VI of the international Convention for the Prevention of Pollution from Ships (the MARPOL Convention). These measures address ship types responsible for approximately 85% of CO2 emissions from international shipping and, together, they represent the *first-ever, mandatory global regime for CO2 emission reduction in an entire industry sector.*"

IMO: "The Study [Third IMO GHG Study 2014] constitutes, without any doubt, a significant scientific work. It was undertaken on a global scale by a *consortium of world-renowned scientific experts* under the auspices of IMO, and I would like to congratulate all the experts involved for the *comprehensive and rigorous research work they carried out.*"
"Furthermore, the *study findings demonstrate that IMO is best placed, as the competent global regulatory body, to continue to develop both an authoritative and robust greenhouse gas emissions control regime that is relevant for international shipping* while also matching overall expectations for climate change abatement. "

<http://www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Documents/Third%20Greenhouse%20Gas%20Study/GHG3%20Executive%20Summary%20and%20Report.pdf>

UNFCCC: In addition the Kyoto Protocol addresses emissions from fuel used for international aviation and maritime transport in its Article 2, paragraph 2. Article 2.2 of the Kyoto Protocol states that the Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gas emissions not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO), respectively.

http://unfccc.int/methods/emissions_from_intl_transport/items/1057.php

http://unfccc.int/methods/emissions_from_intl_transport/items/6142.php

15(F) 1995 to 2015 - SBSTA continuing role?

http://unfccc.int/methods/emissions_from_intl_transport/items/6142.php

At its first meeting in 1995 (Berlin, Germany, March/April 1995), the Conference of the Parties (COP) *requested the Subsidiary Body for Scientific and Technological Advise (SBSTA) and the Subsidiary Body for Implementation (SBI) to address the issue of allocation and control of emissions from international bunker fuels* and to report on this work to COP 2.

Chronological development under the SBSTA - archive

"In response to this request, emissions from fuel used for international aviation and maritime transport have been continuously addressed under the SBSTA"

http://unfccc.int/methods/emissions_from_intl_transport/items/1057.php

Emissions from fuel used for international aviation and maritime transport have been addressed under the United Nations Framework Convention on Climate Change (UNFCCC)

process since the first meeting of the Conference of the Parties (COP). At its first meeting in 1995 (Berlin, Germany, March/April 1995), the COP requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) to address the issue of allocation and control of emissions from international bunker fuels and to report on this work to COP 2. In response to this request, emissions from fuel used for international aviation and maritime transport have been continuously addressed under the SBSTA.

15(G) 1995 to 2015 - Parties working through IMO?

In addition the Kyoto Protocol addresses emissions from fuel used for international aviation and maritime transport in its Article 2, paragraph 2. Article 2.2 of the *Kyoto Protocol* states that the *Parties* included in Annex I *shall pursue limitation or reduction of emissions of greenhouse gas emissions* not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO), respectively.

In accordance with the IPCC Guidelines for the preparation of greenhouse gas (GHG) inventories and the UNFCCC reporting guidelines on annual inventories, emissions from international aviation and maritime transport (also known as international bunker fuel emissions) should be calculated as part of the national GHG inventories of Parties, but should be excluded from national totals and reported separately. These emissions are not subject to the limitation and reduction commitments of Annex I Parties under the Convention and the Kyoto Protocol. Previously, in the context of paragraph 1b(iv) of the Bali Action Plan, emissions from international bunker fuels has been a subject of discussions under the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA)

15(H) 2016 - "Parties" include international shipping consortia?

(a) ICS, International Chamber of Shipping

"ICS is the principal international trade association for merchant shipowners and operators, representing all sectors and trades and over 80% of the world merchant fleet."

<http://www.ics-shipping.org>

(1) August 2016 view by International Chamber of Shipping (ICS):

"...IMO should develop an *Intended IMO Determined Contribution on CO2* reduction for the *international shipping sector as a whole, taking account of the UNFCCC (COP 21) Paris Agreement*".

quoted from February 2016 MEPC 69/7/1 "Reduction Of GHG Emissions From Ships", ICS proposal to Marine Environment Protection Committee (MEPC) of IMO.

<http://www.uscg.mil/imo/mepc/docs/MEPC69-report.pdf>

February 2017 view attributed to ICS Chairman:

"...any IMO goals that are sufficiently ambitious to allow shipping to play its part in achieving the United Nations '2 degree' climate change target should also be realistic. Ambitious CO₂ reduction objectives will only be achievable with alternative marine fuels which do not yet exist, although we are very confident that they will be available in the not too distant future"

Widespread availability of alternative fuels (such as hydrogen or fuel cells) is not expected for at least another 20 or 30 years.

If IMO decides to develop a Market Based Measure, ICS says that the *clear preference of the industry is for a bunker fuel levy.* [13]

February 2017 "ICS Chairman Sets Out Plan For CO2 Reduction By Shipping Sector"
<http://www.ics-shipping.org/news/press-releases/2017/02/24/ics-chairman-sets-out-plan-for-co2-reduction-by-shipping-sector>

(2) An expanded view at August by ICS and other 'Co-sponsors' including ICS, BIMCO, INTERCARGO, INTERTANKO and WSC [12].

"...consistent with the spirit of the UNFCCC (COP 21) Paris Agreement, IMO is expected to determine the need for the international shipping sector to further reduce GHG emissions, in particular CO2 and if so, how this can be done."

The co-sponsors believe that the priority for the Committee at MEPC 70 must be the *adoption of the CO2 data collection system* and the finalisation of the associated IMO Guidelines. This will be necessary to demonstrate that IMO is not only responsible but is also the only appropriate forum for regulating CO2 reduction measures by the international shipping sector.

Consistent with the Paris Agreement, the co-sponsors [cite deleted] fully agree that IMO should determine a possible fair share contribution for the international shipping sector.....

Many UNFCCC Parties have made INDCs which make clear, after taking account of their national circumstances, that they are currently unable to commit to absolute CO2 reductions by their national economies in the immediate future.

Great care is therefore needed in attempting to define a 'fair share' for the international shipping sector....

The Paris Agreement does not contain any reference or framework for determining a 'fair share' with respect to the contributions that will be made by UNFCCC Parties.

August 2016, MEPC 70/7/XX "Reduction Of GHG Emissions From Ships" submission by "co-sponsors" including ICS, BIMCO, Intercargo, Intertanko and WSC.
<http://www.ics-shipping.org/docs/default-source/Submissions/reduction-of-ghg-emissions-from-ships.pdf?sfvrsn=0>

"Co-sponsors" along with ICS, included
BIMCO, INTERCARGO, INTERTANKO and WSC
(a) BIMCO, Baltic and International Maritime Council

"BIMCO is the world's largest international shipping association, with 2,100 members in around 130 countries. Our global membership includes shipowners, operators, managers, brokers and agents."

<https://www.bimco.org>

(b) INTERCARGO, International Association of Dry Cargo Shipowners.

"Our main role is to work with our members, the regulators and other Shipping Associations to ensure that shipping operates safely, efficiently, environmentally and profitably. To do this, *we actively participate in the development of global legislation through the International Maritime Organization* other similar bodies....It was established

in 1980 with the objective of giving a voice to shipowners, managers and operators of dry cargo vessels and represent better this shipping sector. The power of INTERCARGO, like its partner shipping associations, is that collectively, it is possible to change bulk carrier industry for the better in a world where one bulk carrier shipowner acting on its own finds it most difficult to make itself heard and facilitate progress."
<http://www.intercargo.org/en/>

(c) INTERTANKO, International Association of Independent Tanker Owners
"Membership is open to independent tanker owners and operators of oil, chemical and gas tankers, i.e. non-oil companies and non-state controlled tanker owners, who fulfil the Association's membership criteria. As of January 2016, the organisation had 210 members, whose combined fleet comprises some 3,654 tankers totalling over 312.7 million dwt. *Within the shipping industry itself, INTERTANKO participates in discussions within the International Maritime Organisation (IMO) where we have NGO status, and the International Oil Spill Compensation Fund. In addition, it has consultative status at the United Nations Conference on Trade and Development. Oil, its derivatives and gas will remain the world's most critical commodity in the foreseeable future and tankers will be needed to distribute it to where it is needed. As long as tankers are vital to this distribution INTERTANKO will provide leadership in the development and implementation of industry standards and practices, and international regulations for maritime safety and environmental protection.*
<http://www.intertanko.com/About-Us/>

d) WSC, World Shipping Council
WSC "members operate approximately 90 percent of the global liner ship capacity, providing approximately 400 regularly scheduled services linking the continents of the world. Collectively, these services transport about 60 percent of the value of global seaborne trade, and more than US\$ 4 trillion worth of goods annually.
<http://www.worldshipping.org>

e) Other shipping industry publications
But Mr Madsen pointed to Norway's NOx fund, which taxes NOx from ships, fishing vessels and other industries with the sum raised ring-fenced from general taxation and allocated to NOx-reducing schemes. "The uptake of LNG started in Norway because of the NOx fund," Mr Madsen said. "IMO could do that on a larger scale." But he conceded that, although it has worked in Norway, "that may not be the case all over the world."
Asked by Marine Propulsion how the tax would be levied and managed, he said that IMO should collect it. Since every ship has an IMO number, it could be enforced by a threat to withdraw the number so that a ship could not trade. He also foresaw that in years to come, shipping could be brought within the scope of the Paris Agreement on climate change, which comes into force on 4 November, and have to contribute to its aid funds. This bunker tax could be a source of money for that, he suggested.
http://www.lngworldshipping.com/news/view/global-fuel-tax-would-reduce-co2-emissions-seminar-hears_45129.htm

15(I) but see Pre-2017 Administration statements regard IMO and MARPOL "EPA participates on the U.S. delegation to the International Maritime Organization (IMO), which is part of the United Nations. The Marine Environment Protection Committee (MEPC) is a group of member states within IMO that works on maritime safety and security and the prevention of marine pollution. The resulting global standards are embodied in the International Convention on the Prevention of Pollution from Ships, a treaty called "MARPOL." In particular, MARPOL Annex VI defines engine and vessel requirements related to air pollution."

Found at <https://www.epa.gov/regulations-emissions-vehicles-and-engines/international-standards-reduce-emissions-marine-diesel>

The following statement is found in Federal Register Volume 74, Number 166 (Friday, August 28, 2009) Proposed Rules, Pages 44441-44595, From the Federal Register Online via the Government Publishing Office No: E9-19187

"To realize the benefits from the MARPOL Annex VI Tier III NOX and fuel sulfur controls, areas must be designated as Emission Control Areas. On March 27, 2009, the U.S. and Canadian governments submitted a proposal to amend MARPOL Annex VI to designate North American coastal waters as an ECA (referred to as the "U.S./Canada ECA" or the "North American ECA"). A description of this submittal and the IMO approval process is set out in Section V. ECA designation would ensure that ships that affect U.S. air quality meet stringent NOX and fuel sulfur requirements while operating within 200 nautical miles of U.S. coasts. We expect the U.S./Canadian proposal will be adopted by the Parties to MARPOL Annex VI in March 2010. *If, however, the proposed amendment is not adopted in a timely manner, we (EPA) intend to take supplemental action to control harmful emissions from vessels that affect U.S. air quality.*

Above cited "Proposal to Designate an Emission Control Area for Nitrogen Oxides, Sulphur Oxides and Particulate Matter, Submitted by the United States and Canada. IMO Document MEPC59/6/5, 27 March, 2009."

<http://www.epa.gov/otaq/regs/nonroad/marine/ci/mepc-59-eca-proposal.pdf>.

"Is EPA Proposing To Change the Current Approach to Engines on Foreign-Flagged Vessels? Since the ANPRM was published, the International Maritime Organization adopted *amendments to MARPOL Annex VI*. These amendments, adopted in October 2008, contain stringent new tiers of NOX emission limits for marine diesel engines as well as new fuel sulfur limits. These requirements are *applicable in the United States to both domestic and foreign-flagged vessels through operation of the Act to Prevent Pollution from Ships (APPS)*, as amended in 2008. Amendments to the Act to Prevent Pollution from Ships were adopted in 2008 specifically to provide the *statutory mechanism to enforce the Annex VI requirements on domestic and foreign-flagged vessels and to enforce the ECA requirements once a U.S. ECA is designated under Annex VI*.....Other comments take the position that EPA not only has the authority to cover such engines and their emissions, but EPA has an obligation to do so. See, e.g., Environmental Law & Policy Clinic at Harvard Law School (HLS), EPA-HQ-OAR-2007-0121, Document No. 0082.1 (March 6, 2008)."

15(J) Were Pre-2017 Administration disclosures about global taxation of marine fuels missing from statements to the Courts? Omitted by accident or inadvertent error? Hidden? Material? Again, for Pre-2017 Administration scope of disclosures, without mention of taxation, please see "Brief In Support Of Defendants' Motion To Alaska's Motion For Preliminary Injunction"

<https://www.state.gov/documents/organization/211890.pdf> and Order Re All Pending Motions,

Alaska et al. v. Clinton, Kerry et al. 3:12-cv-00142-SLG,
972 F.Supp.2d 1111 (2013)

15(K) Echos of chemically incorrect (e.g. not completely accurate from a technology perspective) statement but politically charged

'The Emperor has no clothes' says the naïve to the echoes, again poetic license taken. Requester respectfully contends that, somewhere along the voyages of lives, some "expert" [19] made a technically incomplete statement, perhaps using different words, akin to the cited statement that "a ship's emissions cannot be linked to any one country". Then echoes began.

A statement so incomplete that such was not accurate from a chemistry viewpoint. So inaccurate that it can be confusing and mislead. So misleading that it can be twisted. Echoes of such incomplete, inaccurate, misleading statement were made, repeated and twisted and used for tax and other political purposes including redistribution of earnings and tax revenues. Rather than diminishing in volume and frequency, echoes grew louder and were repeated more frequently and in differing forms of mutations. Echoes of 'the experts' grew in number and their 'expert opinions' were repeated and mutated more and more.

(a) "International shipping is a major – and rapidly growing – source of greenhouse gas emissions. Agreement to apply a carbon price to shipping can both reduce emissions and raise funds for climate change adaptation and mitigation in developing countries. A ship and a coal-fired power station may produce equivalent quantities of greenhouse gas ...but *while it is clear which country is responsible for a power station's emissions, a ship's emissions cannot be linked to any one country. A carbon price must therefore apply equally to all ships.* It is not easy to estimate the impact that a carbon price for international shipping will have on the economies of developing countries. The cost of shipping goods from one place to another (the freight rate) depends on a wide range of factors: including ship type, volume traded, trade imbalances, fuel price, distance travelled, market competition, port infrastructure, and so on. No perfect formula is possible, but a reasonable and workable one can be found.

The proposal on the table in the IMO is both reasonable and workable. It assumes that developing countries will be affected principally through higher import costs, and suggests they should therefore receive a portion of the total revenues raised from the carbon price equivalent to their share of global imports by sea... Discussions on how to allocate emissions to Parties started under the UNFCCC in 1996, but there has been no substantive debate on the issue for several years. In effect, Parties are agreed that the emissions cannot be allocated to individual countries. Citing A. StoicnoI (2011) 'Optimal rebate key for an equitable maritime emissions reduction scheme,'

<https://www.oxfam.org/sites/www.oxfam.org/files/bn-out-of-the-bunker-050911-en.pdf>

(b) Please do see A. Stoicnol statements cited in 15(K)(a) above
http://www.imers.org/docs/Rebate_Mechanism_2-pager_en.pdf

(c) "When the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) was adopted in Japan in 1997, the shipping sector (along with aviation) was treated differently from other (i.e. land-based) sources of GHG emissions. The Kyoto Protocol specifically left it to the IMO in the case of shipping, and its equivalent in the aviation sector, the International Civil Aviation Organisation (ICAO), to pursue measures to reduce GHGs from those sectors. Both sectors are truly global and, unlike ground-based emitters such as power stations, both are self-evidently mobile sources of pollution, which gives rise to obvious difficulties of jurisdiction, measurement and enforcement, among other complexities. These measures were regarded as justifying a global solution, most likely to be found under the auspices of the relevant global associations.
<http://www.lexology.com/library/detail.aspx?g=9e70ee88-b4e9-4fce-8943-cb2dfff9536>

(d) International transportation has been left out of U.N. agreements on fighting climate change because it does not fit easily into control regimes, such as the Kyoto Protocol and the Paris Agreement, which are based on national targets.

Which nation should be responsible, say, for a flight from Mexico City to New York, or a container ship heading from Shanghai to Los Angeles? Should the emissions be logged with the country where the plane or ship departs, or where it arrives, or according to its national flag or legal jurisdiction, or where it takes on fuel, or according to who or what is on board? ... And with shipping, the problem has been further complicated by international lines that registered their ships in nations with lax regulatory systems, known as "flags of convenience." Two-thirds of the world's ships are registered in small non-industrial countries such as Panama, Liberia, and the Marshall Islands... While the EU and two of the three nations with the largest "flag of convenience" shipping fleets — Liberia and the Marshall Islands — backed drawing up plans to bring shipping into line on emissions curbs, they met fierce opposition. Russia, China, India, Brazil, and the third major flag of convenience state, Panama, all put up strong resistance to any idea of substantive talks on limiting emissions. This veto from big developing nations has angered some major players in the industry.
http://e360.yale.edu/features/reduce_co2_emissions_shipping_aviation_regulation_paris

(e) This IMO activity can be contrasted with the UNFCCC process, which has agreed on numerous occasions to limit global mean temperature rise to no greater than 2°C. This sets a clear expectation that globally there will be a complete transition away from fossil fuel by sometime between 2050-2100, and that all sectors will be expected to undertake a 'fair share' of decarbonisation consistent with a series of sectoral carbon budgets.....International shipping needs global regulatory solutions and IMO is the only body with this mandate. However climate change mitigation is a zero sum game,,, and every sector is expected to contribute. <http://www.ssi2040.org/wp-content/uploads/2017/01/CO2-emission-targets-UCL-report-for-SSI.pdf>

(f) Because we expect the proposed amendment to Annex VI designating a North American ECA will be adopted in a timely manner, the result of the combined CAA program and the ECA designation will be the application of comparable NOX standards to domestic- and foreign-flagged vessels which will be enforceable under a combination of the Act and APPS.

As a result, it would not be necessary to resolve the issue of whether we have the authority to impose section 213 CAA standards on foreign-flagged vessels. For this reason, we are not proposing to change our current approach with regard to the application of the Clean Air Act marine diesel engine standards to engines on foreign-flagged vessels. The conditions that led us to this conclusion in 2003 are the same today, assuming approval of the North American ECA. Because this decision not to address our authority to regulate foreign-flagged vessels at this time is predicated upon timely approval of the U.S.-Canada proposal to amend Annex VI to designate the North American ECA, we will revisit this approach if the ECA is not adopted as expected.

Found at page 44475 of Federal Register Volume 74, Number 166 (Friday, August 28, 2009)

(g) Ocean-Going Vessels and Large Ships. The CAA regulates new and in-use U.S. flagged compression-ignition marine engines (also called marine diesel engines), vessels containing such engines, emissions from such engines, as well as the sulfur content of marine fuel. EPA's strategy to address emissions from all ships that affect U.S. air quality includes enforcement of CAA standards, as well as implementation and enforcement of the international standards for marine engines and their fuels contained in Annex VI to the International Convention on the Prevention of Pollution from Ships (a treaty called MARPOL) under the authority of the Act to Prevent Pollution from Ships (APPS).
<https://www.epa.gov/enforcement/air-enforcement#ocean>

(h) view for IPCC found in CO Emissions from Stationary Combustion of Fossil Fuels
The emissions form part of the total from fuel combustion reported under the activities classified under section 1A of the Source/Sink categories given in Vol 1 of the IPCC *Guidelines*. By definition, emissions from mobile sources should be excluded. However, this is not always possible because *mobile sources cannot be excluded when using the Reference Approach (RA) and may be only partly excluded when using the Sectoral Approach (SA) as the activity data may conceal some fuel use in mobile plant*.
http://www.ipcc-nggip.iges.or.jp/public/gp/bgp/2_1_CO2_Stationary_Combustion.pdf

[16] *"In the same way that the INDCs under the Paris Agreement cover GHG reductions for entire national economies, a fair share contributed by IMO should be made on behalf of the international shipping sector as a whole."* Introduction Para 10, of Reference [11] August 2016, MEPC 70/7/XX "Reduction Of GHG Emissions From Ships" submission by "co-sponsors" including ICS, BIMCO, Intercargo, Intertanko and WSC.
<http://www.ics-shipping.org/docs/default-source/Submissions/reduction-of-ghg-emissions-from-ships.pdf?sfvrsn=0>
Added note: World Bank senior economist suggested in 2015 "a global charge of \$25/ton CO2 would raise around ...\$25 billion from shipping" per year.
<https://www.weforum.org/agenda/2015/01/how-to-tax-aviation-and-shipping-emissions/>

"Reducing CO2 - Acting on the Paris Agreement"

"While reference to a maritime fuel levy was deleted from the final text of the Paris Agreement, in January 2016 the International Monetary Fund (IMF) repeated its call for a carbon tax to be imposed on shipping at a level of about US\$ 95 per tonne of fuel. A similar proposal was made in 2015 by the Organisation for Economic Co-operation and Development (OECD) International Transport Forum....In the event that IMO Member States

should ever decide to develop an MBM, the position of ICS is that the clear preference of the majority of the industry is for a simple global levy based on fuel consumption."
[http://www.ics-shipping.org/key-issues/all-key-issues-\(full-list\)/reducing-co2---acting-on-the-paris-agreement](http://www.ics-shipping.org/key-issues/all-key-issues-(full-list)/reducing-co2---acting-on-the-paris-agreement)

[17] Incomplete thoughts: Requester defers to applicable authorities the question " how best is an ethical solution possible given all differing interests? Is there a solution consistent with historical local taxation of produced goods but having tax exclusions for bunker fuels? A solution considering Paris Agreement impositions of costs for other environmentally sensitive activities? (e.g. where land CO2 emissions increase for production of cleaner marine fuel). See for example summary of USA taxation <https://www.irs.gov/publications/p510/ch01.html>

17(a) Is the following one approach consistent with EPA's Policy? - For a ship found using non-certified marine fuel (as per main body of text supra), the Ship Master would be accountable if the Ship's purchase records did not provide trace to point(s) of purchase and alleged quality within the mix onboard at time of inspection (e.g. Supplier, perhaps multiple in chain of each within then current ship fuel mix). In turn, each Supplier(s) would be accountable, jointly and severally, if Supplier's purchase records did not provide trace point to Producer(s) and each quality (again, perhaps multiple) within the mix supplied. The country where a putative fuel was produced should impose and collect the penalty and remit to various recipient countries to which the ship delivered its various cargo while possessing the fuel.

Innocent fuel producers, distributors, purchasers and users will be motivated to use more effective practical controls (tracing, fuel markers, mechanical systems, storage segregations, etc.) and sales contracts that contain differing covenants, indemnities, and other protections and users may require random independent testing and certification for 'trust but verify'. Entities which then choose to enter the supply chain "on purpose" with non-certified fuel (knowing or should have known of targeted marine use either to produce, distribute (including resales), purchase (including buy-sell) non-certified marine fuel) would be subject to penalty assessed based on level of pollution potential (e.g. determined by emissions chemical content of the putative fuel against standard marine engine test of emissions of certified clean marine fuel).

More thoughts, likewise incomplete but perhaps useful: If fuel purchased meets quality certification and applicable registration for each fuel tested against new standard marine fuel qualities, then no tax or penalty should apply. Various means can be adapted to address and improve current standards. IMO certification and registration number requirements now in place could be adapted for trade by vessels to ensure requirements for use of registered fuel. This enables infrequent but important vessel calibration against test fuel and also helps ship address fuel quality fraud issues at point of supply, enabling environmental protection against tainted or contaminated fuels. Ship using IMO Certified Fuel can fly flag "IMO CCMF "certified clean marine fuel". As condition for IMO registration number assignment, vessel becomes subject to fuel inspection at any location including open seas, which is not the current norm. Severe penalties should apply for flying flag when not using IMO CCMF. And investments in mitigation devices and corresponding defenses and credits can be allowed in cases of onboard mitigation when user show such mitigation is effective (for specific fuel then used and specific mitigation then used) to drop emissions to IMO CMF levels, given

cleaner fuels need less mitigation. For samples of complexity of applying data as to emissions related to 'combustion controls' (focused on land based sources but some extendible to at sea) please see reference points provided by <https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s03.pdf>

[17(b)] This sub-note addresses complexity of attempts for any holistic 'ore/wellhead/other source to ship exhaust' source emissions accounting, instead of Requester's focus on 'final fuel production' with trace to 'final fuel mix purchases' proposal in the main body. One might otherwise think a fuel producer in each country in which the final fuel mix used by a ship was produced could easily account (or require sub-suppliers of raw materials, ingredients or other components to account) for emissions associated with each of the components linked to the fuel and each country of ingredient activity. In main body, Requester asks one to appreciate, for example, that land based activities to remove sulfur to enable at seas sulfur reduction may increase CO2 emissions in the country of removal and instead impact local land based INDC. Yet holistic emissions accounting is not simple and can give rise to errors and imbalances if done improperly.

For an example of systems complexity, please see EPA's Figure 1, at page 3 of https://www.epa.gov/sites/production/files/2015-10/documents/subpart_w_2014_data_summary_10-05-2015_final.pdf of a report of an attempted emissions assessment from over 2,400 facilities conducting petroleum and natural gas systems activities, such as production, processing, transmission, and distribution. Then note the EPA's caution that: "[i]t is important to be aware of [these] limitations and differences when using this data, particularly when attempting to draw broad conclusions about emissions from this sector." Requester then asks: Then what about computation of taxation?

For an additional example of complexity in just one arena only "flares or flaring" involving multiple countries, please see World Bank report at <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSDNET/0,,contentMDK:22416844~menuPK:64885113~pagePK:64885161~piPK:64884432~>

Also, in regard to refining, then please see 2015 update at <https://www.epa.gov/sites/production/files/2015-12/documents/revision-refineries-emissions-estimate-4-10-2015.pdf> updating 2010 initial "white paper" study of backend portion which notes in 2010 that such paper "...do(es) not set policy, standards or otherwise establish any binding requirements..." For October 2010 white paper, please see: <https://www.epa.gov/sites/production/files/2015-12/documents/refineries.pdf>

Now take those complex accounting issues to multiple countries with different operations and then ask each of the various cultures to account in a uniform manner.

Thus while in various sub-arenas, such holistic approaches could address cumulative emissions, true comparative calibration and summation data for taxation is difficult, especially with multiple country involvement, for instance (u) in nuclear, from uranium ore mining and extraction, and transportation, to fuel cell formation, to unit operations such as cooling and backups, to spent fuel disposals, (v) in gas production toward LNG, then allocations for wellhead flaring, methane leakage in gas production, transportation, storage, liquefaction, loading, and use in holistic manner from wellhead to exhaust, (w) in oil shale or tar sands toward liquids or gaseous fuel, same holistic from mining to fuel production to ship exhaust, (x) in crude toward fuel, same holistic wellhead to fuel production to ship exhaust and (y) in coal toward suitable fuels, such as emissions from coal mining, coal treatments, gasification and the like to related fuel and ship exhaust.

[18] Requester asks Investigator to be mindful of a learned discussion relatively near the date the USA Constitution was framed. The discussion was among justices of the United States Supreme Court in Holmes v Jennison 39 U.S. 14 Pet. 540 (1840) where one expressed intent of the framers:

The laws of nations have no force over the people, individually, in any country, but only regulate the conduct of nations, as such, towards each other. If any duties or obligations are created by those laws, as between one country and another, each of these owes such duties or obligations in her collective capacity, and can only perform them as its own sovereign authority may direct or permit. In an absolute government, as already stated, the sovereignty centres in the monarch, and every thing is directed by him, according to his own arbitrary will. But in a republic, the sovereign power resides in the people, or is lodged where they have placed it; and the proceedings must always be in conformity with the principles of the government. It follows, therefore, that when it becomes necessary, in the performance of a national duty or obligation towards a foreign power, to interfere with individuals, it can be done only through laws emanating from the sovereign authority of the state where they reside, or happen to be. For as the obedience of individuals is due only to those laws, so are they, at the same time, under their protection, and can only be reached through them.

A few extracts from an eminent writer on the laws of nations, showing the manner in which these different words have been used and the different meanings sometimes attached to them, will perhaps contribute to explain the reason for using them all in the Constitution..... Vattel, page 192,

Sec. 152, says: "A treaty, in Latin *foedus*, is a compact made with a view to the public welfare by the superior power, either for perpetuity or for a considerable time."

Section 153. "The compacts which have temporary matters for their object, are called agreements, conventions, and pactions. They are accomplished by one single act, and not by repeated acts. These compacts are perfected in their execution once for all; treaties receive a successive execution, whose duration equals that of the treaty."

Section 154. *Public treaties can only be made by the "supreme power, by sovereigns who contract in the name of the state.* Thus conventions made between sovereigns respecting their own private affairs, and those between a sovereign and a private person, are not public treaties."

Section 206, page 218. "The public compacts called conventions, articles of agreement, &c., when they are made between sovereigns, differ from treaties only in their object."

After reading these extracts, we can be at no loss to comprehend the intention of the framers of the Constitution in using all these words, "treaty," "compact," "agreement." The word "agreement," does not necessarily import any direct and express stipulation; nor is it necessary that it should be in writing. If there is a verbal understanding to which both parties have assented and upon which both are acting, it is an "agreement."

[19] A lesson in "leading experts", from near closing scenes of 'Raiders of Lost Ark' - full credit to film directed by Steven Spielberg, screenplay by Lawrence Kasdan, from a story by George Lucas and Philip Kaufman:

Brody: Where is the Ark?

Maj. Eaton: I thought we'd settled that. The Ark is somewhere very safe.

Jones: From whom?

Brody: The Ark is a source of unspeakable power and it has to be researched.

Maj. Eaton: And it will be, I assure you, Dr. Brody, Dr. Jones.

We have top men working on it right now.

Jones: Who?

Maj. Eaton: Top men.

Campbell Black (September 1987). "Raiders of the Lost Ark." Ballantine Books. ISBN - 034503537507.

[20] Requester is mindful that, in certain instances, a patent issued in a member country of the Paris Convention for the Protection of Industrial Property may not be enforced against a visiting ship of another member country in which a corresponding patent is not issued, when that visiting ship is in domestic waters or in port as part of international transport.

Article 5terPatents: Patented Devices Forming Part of Vessels, Aircraft, or Land Vehicles

In any country of the Union the following shall not be considered as infringements of the rights of a patentee:

(i) the use on board vessels of other countries of the Union of devices forming the subject of his patent in the body of the vessel, in the machinery, tackle, gear and other accessories, when such vessels temporarily or accidentally enter the waters of the said country, provided that such devices are used there exclusively for the needs of the vessel;

http://www.wipo.int/treaties/en/text.jsp?file_id=288514#P139_19040

[Last page]

Submitted for consideration – one form of graphical summary of potential SOx reduction (where emissions are deemed dispersed and distributed over open seas in their entirety, not long concentrated along shipping routes for extended periods). Similar reductions of NOx and noxious metals can give “ECA marine type” performance for ‘open seas’ (e.g. 0.1 wt.% S max.) even though the ‘new fuel’ is not conventional. Tempest in a teapot, or winds over the sea, time will tell for this technology. Chart assumes full development, commercial production, and deployment of ‘new fuel’, any or all of which steps can be impeded by improper regulatory conduct.

SOx Emissions : Open Seas (OS)

