

Responding to Climate Change: The Contribution of Maharishi Vedic Science

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Abstract: The scope and reach of the climate change challenge is clearly unprecedented, as is its level of global urgency. We review the broad results of the scientific program associated with it. These results identify serious impacts on physical, biological, and human systems, as separate systems and as cascading through them. The global risks associated with these impacts are daunting. Modern analytic approaches to this order of complexity and uncertainty have so far made only a limited contribution to its understanding and resolution. In particular these approaches identify a crucial gap: the understanding and modelling of the whole, rather than the parts, of the system. We then advance the promise of Maharishi Vedic Science in providing this missing scientific knowledge, in principle and in practice. In particular we explore a model offered by Maharishi Vedic Science which describes eight levels of Natural Law to embrace all the complex diverse systems of which the global climate system is comprised. Further we review the technologies through which Maharishi Vedic Science offers to restore balance, integration and orderly growth to all systems from their foundation in the Unified Field of Natural Law. We outline the extensive scientific research program which has provided robust support for the predictions of Maharishi Vedic Science with respect to both individual and collective life; which extend, we suggest, to the global community and to the global challenge of climate change.

Keywords: Climate Change, Global Climate Systems, Global Risks, Global System Cascades, Wicked Problems, Maharishi Vedic Science, Natural Law, Technologies of Maharishi Vedic Science

1. Introduction

The global challenge of climate change has become in recent years a dominant theme of international discourse. The emergence of a scientific consensus concerning the reality of climate change, the role of human activity as its principal modern driver, and the global reach of its impacts has captured the attention of both governments and concerned citizens around the world. With the identification of greenhouse gas (GHG) emissions—carbon dioxide (CO₂), methane (CH₄), nitrous oxides (NO_x), sulphur dioxide (SO₂),

chlorofluorocarbons (CFCs), black carbon aerosols, and others—as key climate forcing agents from both private and public sectors, the development of climate change policy and action has become an urgent priority for all levels of government. This has led to a succession of international conferences at Kyoto, Copenhagen, and Paris in an attempt to develop a coordinated international response to climate change, which is a clear requirement for meeting the challenge of this global phenomenon.

The most successful of these has been the Paris Conference, December 2015. Representatives of 195 nations

reached an agreement to limit emissions in their countries to levels designed to prevent dangerous climate change. A 2°C increase of global warming is proposed as the upper limit of safety, even though that level itself poses to the global community enormous challenges of mitigation and adaptation. Beyond that the scientific evidence projects that global change will become unmanageable and is likely to produce unprecedented threats to the stability of global environments and ecosystem services and to the societies that depend on them.

Despite the success of the Paris Conference in identifying a common emissions goal and securing international ratification of it there remain significant challenges in implementing it, since that is dependent on the independent actions of sovereign governments. More troubling is the analysis by the scientific community that the Paris agreement, even if fully implemented, is likely to meet at best perhaps half of what is required to meet the 2°C goal. Further, it is well recognised that the global climate system contains inbuilt momentum which will see global warming continue even if emissions due to human activity were stabilised now. In consequence, it is clear that a significant amount of work remains to be carried out in order to stabilise the global climate system.

This essay first explores the unprecedented nature and scope of climate change viewed as a global problem, or, more precisely, as a system of interlinked problems. It then reviews formal approaches drawn from systems theory, complexity theory and uncertainty theory, or combinations of these, that have attempted to encompass the problem. We conclude that these approaches, while providing different kinds of insight in specific arenas, do not seem able to provide understanding at the depth that is needed to identify and direct systematic and effective action on the global scale required.

We therefore turn to a quite different structure of knowledge which does offer the depth and scope of understanding of the order required to encompass the challenge of climate change. This is Maharishi Vedic Science, developed by Maharishi Mahesh Yogi. Maharishi is renowned throughout the world for his holistic vision of the Vedic wisdom in its entirety, and of its supreme value for human life, both individual and collective. Maharishi Vedic Science incorporates both principles and practice: it analyses the problem at its root, identifies a solution to it, and provides technologies and programs to implement that solution. The effectiveness of these technologies and programs has been thoroughly documented in a 50-year scientific research program of published studies: in foundational disciplines, such as physiology and psychology; in applied disciplines, such as education and health; in quality of life studies on the level of society as a whole; and, most importantly, on the level of government itself. Maharishi Vedic Science therefore offers, we propose, a comprehensive and integrated response to the problem of climate change; and one which, fortunately, is simple and inexpensive to implement by any government and by the international community.

2. Part One: The Climate Change Challenge

2.1. Dimensions of Climate Change

Accessible, well-received accounts of the reach and complexity of climate change as a global challenge have been published by scientists such as James Hansen and Tim Flannery, and by social and policy commentators such as Naomi Klein. [37, 28, 29, 5 2] However, the daunting scientific task of analysing climate change has been undertaken largely by the International Panel on Climate Change (IPCC). Established in 1988 under the auspices of the United Nations, their work is without precedent. Over the past nearly three decades tens of thousands of published scientific papers have been reviewed, evaluated and synthesised by thousands of scientists working in climate-related disciplines across the world. Their stated goal has been to provide the best account possible for the observed indications of climate change and for their projected path under various mitigation scenarios; for the observed and projected impacts on environmental and human systems; and for approaches to mitigation and adaptation.

In this section we summarise some main findings of the IPCC work, drawing on their fifth and latest assessment, published in 2015. [45, 46] There is no attempt here to cover the entire corpus of scientific research into climate change and its impacts, or to engage in an evaluation of it. Our task is rather to lay the ground for an exploration of what *kind* of problem the climate change crisis presents. The answer to that question bears directly on the way in which the global challenge of climate change is to be best approached.

IPCC projections of climate change to 2100 have been developed through scenario modelling, as Representative Concentration Pathways (RCPs). The RCPs examine different patterns of anthropogenic GHG emissions driven by human activities such as population size, economic activity, lifestyle (consumption), energy use, land use, technology and climate policy. Four primary RCPs are projected, one based on stringent mitigation, one on very high GHG emissions, and two are intermediate scenarios. The paths projected under RCP modelling largely converge until 2035, and then begin to diverge, depending on which mitigation policies and implementation strategies are modelled.

Conclusions from RCP modelling are unambiguous. Warming trends and impacts are well established:

Surface temperature is projected to rise over the 21st century under all assessed emission scenarios. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. The ocean will continue to warm and acidify, and global mean sea level to rise. [46, p.10]

Earth System Models indicate year-round reductions in Arctic sea ice under all RCPs, with the possibility of a summer ice-free state by mid-century. Feedback loops are likely to drive even greater warming. In a similar way under

all RCPs the near-surface permafrost extent at high northern latitudes will be reduced under warming conditions, potentially releasing stored methane, a potent GHG, and again accelerating warming. Global glacier volumes are projected to decrease significantly and to become a major driver of sea-level rise. [46, pp.8-13]

Clearly changes of these orders of magnitude in the Earth System must have significant impacts for all biological life:

Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. [46, p.56]

The IPCC review of international scientific evidence already points to observed changes in natural systems due to climate change. These changes can be expected to increase under all RCPs. Hydrological systems in many countries have been directly affected, in the reduction of both volume and quality of water. Species, on land, in freshwater, and in the ocean, have moved geographical ranges and migration patterns, changed seasonal activities and species interactions, and have experienced population declines in response to climate change. Extinction rates have increased and will continue to increase under all scenarios: plants, small mammals, and freshwater molluscs are most affected. Coral reefs and polar ecosystems are particularly vulnerable to increasing ocean temperatures and acidification. The IPCC notes that "Coastal systems and low-lying areas are at risk from sea level rise, which will continue for centuries even if the global mean temperature is stabilized." [46, p.13] Moreover, biological systems in particular are characterised by thresholds beyond which abrupt and irreversible changes can occur. It is likely that the majority of these thresholds are unknown. Scientific studies on the global environment continue to confirm these trends in the published literature. [89, 6, 11, 49, 50, 51, 55, 72, 85, 92, 94, 105, 106]

The impacts of climate change on human populations and human systems are also being documented in the literature. Increasing damage to infrastructure, property and other assets and associated threats to human safety are being driven by the increase in the frequency and severity of storm events. Threats to human health are well documented. Low-lying islands and coastal areas are experiencing inundation from sea-level rise. Indigenous peoples within the northern latitudes and Arctic Circle, where warming effects are greatest, face changes to their environments, driven by climate change, which threaten their ancient cultures and ways of life. Forced migration driven by climate stress is occurring now and will increase, together with the potential conflicts engendered by it. Seminal studies of the global economy, notably by Nicholas Stern and Ross Garnaut, have analysed the international economic impacts of climate change and explored the costs and benefits of mitigation and adaptation responses under the major RCPs [46, pp.13-16, 32, 96-100, 108].

The response of the global community to the climate change crisis has for some time been framed in terms of

mitigation and adaptation, and the IPCC Assessment reflects these priorities. In terms of mitigation it is noted that "Substantial cuts in GHG emissions over the next few decades can substantially reduce risks of climate change by limiting warming in the second half of the 21st century and beyond." [46, p.15] The RCPs indicate that global net emissions of CO₂, in particular, would need eventually to decrease to zero.

In terms of adaptation, the IPCC assessment points to the need for complementary actions across all levels of society, from individual households, to local and regional governments, to national governments and to the international community. The protection of vulnerable groups is critical. This is an enormously complex undertaking, involving the production and distribution of information, policy and legal frameworks, legislation and regulation, economic strategies and instruments, new technologies, and financing. Such an effort will need to be underpinned by new structures of decision-making, ethics and values. The IPCC warns that even with the strongest mitigation and adaptation actions significant climate change damages to human and natural systems in all locations across the globe are already unavoidable. [46, pp.17-31, 1, 7, 8, 52, 56, 68, 73]

The impacts of climate change on agriculture and food security exemplify the scale, reach and complexity of the climate change problem. These were recently summarised in a 2016 report by the Food and Agriculture Organisation of the United Nations (FAO). [23, 24] Climate change impacts on agriculture vary from region to region. However, negative impacts are projected across all regions. In Asia, for example, freshwater availability will decline in South, East and Southeast Asia, home to billions of people. Rice yields and livestock numbers will decline under heat stress. Extreme weather events will impact fisheries and aquaculture in large river deltas. Marine fisheries will decline in the tropics. Many forest species face extinction. A general increase in the frequency and extent of forest fires and the risk of invasive species, pests, and diseases is projected.

The report notes that these impacts are occurring at a time when global food demand is projected to increase in 2050 by at least 60 per cent above 2006 levels. Population increases are concentrated in areas of high levels of undernourishment, in areas where the environmental impacts of climate change are greatest. The poorest and most vulnerable populations are therefore at greatest risk. The challenge of climate change is thus inextricably linked to the challenge of global poverty and inequality.

The FAO calls for a comprehensive restructuring of global agriculture to viable and sustainable systems, which focus on such practices as the use of nitrogen-efficient and heat-tolerant crop varieties, zero-tillage and integrated soil management. It is noted that smallholders, who still manage the majority of agricultural enterprises in Africa and Asia, face many barriers, including barriers in accessing markets, credit, extension advice, weather information, risk management tools and social protection. Social and cultural change is also needed: centrally it is noted that women, who

make up nearly half the agricultural labour force in developing countries, are particularly disadvantaged. The report concludes that

There is no simple “technological fix”. What is needed is a reorientation of agricultural and rural development policies that resets incentives and lowers the barriers to the transformation of food and agricultural systems. [23, p.4]

That recommendation is made not only for developing countries, but also for the industrial farming systems of developed countries. [64, 80]

Table 1 presents an indicative summary, by no means comprehensive, of dimensions—high-level systems and factors—identified by the IPCC Fifth Assessment and other macro-scale studies as central to any consideration of the climate change challenge [10, 12, 31, 36, 45, 63, 76, 87, 93, 102].

Table 1. *Dimensions of Climate Change.*

Climate system	Factors and dimensions
Atmosphere	Surface temperature; stratospheric ozone depletion; variation over latitudes, global water cycle; precipitation dynamics.
Ocean	Warming; layers; evaporation; precipitation; salinity; acidification; global water cycle; latitude patterns; ocean patterns.
Cryosphere	Greenland and Antarctic ice sheets; glaciers worldwide; Arctic sea ice; snow cover; permafrost.
Sea level	Glacier loss effects; land water storage; thermal expansion; ocean circulation; global patterns; differential impacts on coasts.
Paleoclimatology	Reconstruction of past global environmental conditions; modelling past systems; derivation of climate change relationships; comparison with modern data.
Biological systems	Factors and dimensions
Organism	Impacts at the organism level
Species	Terrestrial, freshwater, marine species; ranges, migration, abundance, activities, interactions; species interactions; global biodiversity; national and regional biodiversity.
Ecology	Ecological community structures; landscape ecological patterns; scales.
Extreme events	Droughts; wind-storms; fires; pest outbreaks; precipitation; coastal flooding.
Human systems	Factors and dimensions
Human activities	Fossil fuel combustion; industrial processes; cement production; flaring; energy, industry, transport, building sectors; population growth; economic growth; energy intensity improvements and reversals; waste volumes and types.
Agriculture	Major crop yields; food security; commodity market price effects; land use; land clearing; livestock methane; soil erosion and dust.
Health	Heat-mortality; cold-mortality; disease vectors and patterns; water-borne illnesses.
Social	Distribution of wealth, global poverty; demographics, migration; access to technology and information; employment patterns; societal values; governance structures and institutions; social marginalisation; food security, food prices; conflict zones; indigenous cultures.
Levels of government	International, national, regional, and local governments; decision-making; indigenous and local knowledge; plans, policies, and policy instruments.

The highest levels of global risk associated with the RCPs is identified by the IPCC Assessment to reside in five arenas:

Table 2. *IPCC Assessment of Highest Levels of Global Risk.*

1. Unique and threatened systems	Ecosystems; cultures.
2. Extreme weather events	Drought; storms; flooding; wild-fires. Greater impact on the vulnerable and disadvantaged; continental, ocean differences.
3. Distribution of impacts	Biodiversity; ecosystem services; global economy.
4. Global aggregate impacts	Tipping points; thresholds; irreversible regime shifts.
5. Large-scale singular events	

Importantly the IPCC Assessment notes that cascading impacts have been observed and documented between these major global systems: these “can now be attributed along chains of evidence from physical climate through to intermediate systems and then to people.” [46, p.52] For example, a cascade of impacts can be traced from ocean warming through increased thermal stratification, expansion of hypoxic zones, and regional changes in species abundance, to changes in fishery yields. It is clear that innumerable such cascades exist across climate, biological and human systems. Worryingly, it has also been predicted that most of these have not yet been identified, described, or measured. [46, pp. 51-2, p. 72]

The above summary of risks associated with climate change has been strengthened by recent government assessments in the United Kingdom and in Australia. The UK *Climate Change Risk Assessment 2017* identified the following six priority areas of climate related risks for the UK [15, p.8]:

Table 3. *UK Assessment of Global Risk.*

Flooding and coastal change risks to communities, businesses and infrastructure.	
Risks to health, well-being and productivity from high temperatures.	
Risk of shortages in the public water supply, and for agriculture, energy generation and industry.	More action needed
Risks to natural capital, including terrestrial, coastal, marine and freshwater ecosystems, soils and biodiversity.	
Risks to domestic and international food production and trade.	
New and emerging pests and diseases, and invasive non-native species, affecting people, plants and animals.	Research priority

The Australia: State of the Environment 2016 report observes:

Climate change is an increasingly important and pervasive pressure on all aspects of the Australian environment. It is altering the structure and function of natural ecosystems, and affecting heritage, economic activity and human wellbeing. Climate change will result in location-specific vulnerabilities, and people who are socially and economically disadvantaged are most sensitive to climate change. Evidence shows that the impacts of climate change are increasing, and some of these impacts may be irreversible. [16, p.10]

The World Meteorological Organization’s Provisional Statement on the Status of the Global Climate in 2016

unambiguously confirms the strengthening of the major trends of climate change identified by the IPCC and outlined above. [110]

2.2. Analysing and Responding to the Problem of Climate Change

The scope and reach of the climate challenge—both vertically and horizontally, in space and in time—is clearly unprecedented, as is its level of global urgency. In this section we review briefly the main modelling strategies that have been directed to the climate change problem. We conclude that, taken individually or in combination, these analytic frameworks offer at best limited solutions to some elements of the climate change challenge, and in particular, as we shall see, little prospect of handling the problem as a whole.

2.2.1. Reductionist Approaches

Scientific method and its accumulated findings remain the bedrock of modern knowledge structures. That method, as traditionally articulated by Popper, Hempel, Lakatos, and others, rests on the development of theories and their laws being open to empirical test. Over time, it is assumed, the theoretical structures that survive are more reliable. Theoretical structures are developed mathematically to generate predictions about more phenomena, including those which have hitherto been anomalies. The history of modern physics is often seen as an exemplar of this method. [35, 41, 54, 81, 82]

However, even within the scientific disciplines there has been little success in seeking to identify laws which encompass phenomena across disciplines. Thus reductionist attempts to account for emergent biological patterns by appealing to the physical laws of chemistry and, ultimately, physics have seen only limited success. Parallel research programs in the cognitive neurosciences have achieved some encouraging results but are a long way from systematically bridging the biological and human sciences on the scale that the climate change problem demands. [17, 88]

2.2.2. Systems Approaches

Systems thinking, now elevated to the status of systems science, is well established as a method of approaching global challenges. The three-decade *Limits to Growth* project headed by Donella Meadows and her co-workers is notable for its inclusion of high-level physical, biological and economic parameters. [65-67] The work of Johan Rockström and his co-workers on planetary boundaries is a more recent attempt to quantify thresholds of integrity in global physical systems. [86, 95]

These approaches, however, do not attempt to deal in any depth with the cascades mentioned above, across physical, biological, and human systems. Some tentative steps in that direction have been taken by social-ecological system theorists, exploring the linkages between the expansion of global economic activity, connectivity, and homogeneity on

the ground of the global resource base. [42] This is, however, a horizontal analysis at the global scale, largely disconnected vertically from changes in the systems at the smaller scales which constitute it.

2.2.3. Complexity and Uncertainty

As noted above the climate change problem is characterised by complexity in every domain and at every scale. Biological complexity, in particular, is central: it is of formidable scope and mediates between global climate systems and the ecosystem services on which human populations rely. [83] The fragmentary knowledge of these systems has been well recognised in the scientific literature. [90] Complexity theory, and in particular cellular automata [69], has appeared to offer another path to handling the multiple dimensions of climate change. Here complex emergent behaviour, of the kind displayed by the global systems of climate change, is modelled from the collective behaviour of single units under simple local rules. However, the application of these methods to climate change depends on more basic models, such as species dynamics, and is in its early stages. [101] The advent of big data methods is likely to be critical to the scaling requirement that the climate change problem presents, but these face significant challenges in generating data sufficient to capture complexity even at one level, such as the plant community, let alone across the climate change landscape. [30]

Uncertainty is endemic to every level and to every component of climate change analysis: “Climate change involves uncertainties in a breathtaking number of dimensions, including, but not limited to, the fields of natural science and economics.” [40, p.34] The scientific dimensions of uncertainty have been indicated above. The cascade of these uncertainties into economic dimensions, each with their own uncertainty, creates formidable problems of analysis. The formal analysis of economic decision-making under uncertainty is well-developed and has been applied in the literature to such decision-making under climate change. Emerging trends, learning, thresholds and irreversibility have been approached through option values modelling. However, it is recognised that this kind of analysis represents a first attempt at capturing economic uncertainties, and that many unknown factors are likely to emerge in the future. Risk management frameworks have been used in an attempt to capture and manage such risks, as has fuzzy logic modelling. Importantly, the uncertainties associated with the social and governance dimensions of climate change adaptation have so far resisted formal analysis. [18, 71]

2.2.4. The ‘Wicked Problem’ Concept

A well-known approach to multiple dimensions of complexity and uncertainty is that of ‘wicked problems’. The concept was popularised by Churchman, citing the following definition:

...the term “wicked problem” refer(s) to that class of social system problems which are ill-formulated, where the

information is confusing, where there are many clients and decision makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing. [14, pp. 141-142]

The wicked problem framework has been primarily applied to decision-making in management and public policy. [39] Interestingly, the ‘wicked’ component of the description refers to any attempt to resolve a part of the problem separately from the whole. This is framed as a moral dilemma, in that it is left to others to deal with the rest of the problem.

Climate change has been increasingly recognised as a wicked problem, and one with unprecedented orders of magnitude. Incropera employs the framework in a comprehensive account of the problem of climate change, incorporating considerations of the global climatic system, energy technologies and policy, national economic instruments, the politics of international action, local and regional responses, and ethical and religious dimensions, all bearing on mitigation and adaptation options. [44] Governance has been a particular focus of his analysis, extending to local, national and international scales. National applications of the wicked problem framework have been developed: for example, for Australia, focusing on multi-stakeholder requirements; for China’s coastal reefs; and for Ghana’s rural water challenges. Coastal environments, in both physical and human dimensions, and National World Heritage sites, have been similarly analysed. [27, 38, 43, 70, 79]

It is noteworthy, however, that, while the wicked problem concept has been useful in further mapping the complexities and interlinkages of the climate change problem, translations of the framework into comprehensive programs for action have been conspicuously lacking. Its proposed programs extend more widely and more deeply, perhaps, than more focused frameworks, but inevitably they are limited to sub-systems of the complexities they are attempting to map. They thus appear to be vulnerable to the central challenge that they are attempting to circumvent: the human risks of handling a part rather than the whole.

It is of course the case that climate change has been presented primarily as a problem of emissions, as noted in the Introduction. In this analysis emissions are the “root cause” [107] of the cascading impacts summarised here. Two complementary approaches to the climate problem are then proposed: to mitigate GHG emissions by reducing them; and to adapt to the impacts that they are generating throughout the lag period which will be required to reduce emissions and for their impacts to fall to zero in the climate system—a period estimated in hundreds, rather than tens, of years.

However, brief reflection makes it clear that such an analysis is inadequate. For example, GHG emissions are generated by societies—mainly the industrially developed nations—in pursuit of their collective and individual aspirations. Once the analysis is taken back this further step, the root causes proliferate and become impossible to identify systematically. One might, for example, point to the difficulties faced by the international community in

developing agreements to which sovereign nations are committed in practice. Or one might identify shortcomings in economic theory and practice in failing to incorporate ideas on natural capital into its conceptual frameworks. Or one might point to the attempt to define well-being predominantly in terms of consumption. The pattern of analysis and attempted explanation emerges as fractal: with each level of explanation, even if reductive in its intent, the level of complexity is not reduced.

In concluding Part 1 of this article, we therefore return to the wicked problems framework. Its chief contribution is to have made the overarching principle abundantly clear: any solution to the climate change problem must address the whole, not simply the parts of the complex problem. As noted, this is presented not only as a practical but a moral requirement. As the foregoing sections indicate, the modern physical, biological and human sciences, and the interdisciplinary and cross-disciplinary frameworks, seem, on current trends, unlikely to achieve such a goal; nor, faced with an environment of unimaginable complexity, can they be expected to. Meeting the challenges of climate change is thus first the challenge to find new knowledge: the knowledge of the whole.

To frame the research question in more formal terms it seems useful to have recourse to the concept of laws of nature. Science has proceeded by developing theory to propose particular laws of nature governing specific domains and then by testing the *in situ* predictions that they generate. That method has served the scientific disciplines well, and such understanding of the different components of the climate problem as we have in hand are derived from it. If there is to be scientific, reliable knowledge of the whole, therefore, it seems logical to suggest a parallel structure: principles pertaining to the structure of natural law which governs the whole at its own level, and methods to investigate it are required. It is precisely here, at the unresolved centre of the climate change problem, that the theory and practice of Maharishi Vedic Science, supported by strong global research programs, offers fundamental advances. It is to this arena that we now turn.

3. Part Two: Maharishi Vedic Science Principles and Programs

3.1. Fundamental Principles of Maharishi Vedic Science

Maharishi Mahesh Yogi is honoured world-wide for his holistic vision of the Veda and Vedic literature, the ancient wisdom of Maharishi Vedic Science. Over 50 years Maharishi has laid out the principles of his Vedic Science in lectures and books. This work has been associated with a comprehensive, published scientific research program. We now review its central tenets, comprising both principles and practice, as a systematic approach to the knowledge of the whole, which we have suggested is central in meeting the challenge of climate change. Maharishi’s extensive published writing [25] includes a series of books published in the 1990s

[58-61]. Of these *Maharishi's Absolute Theory of Government* [60] presents one of the most comprehensive, published, and relatively recent accounts of Maharishi Vedic Science, and is the source of the relevant theoretical model employed here. It is therefore the primary source of the discussion that follows.

As an entry into his teaching Maharishi has noted the progress of theoretical physics towards increasing unification of the laws of nature that govern the physical world. This advance, progressively confirmed by experimental results, has culminated in the development of unified quantum field theories. In this view the fundamental particles and forces that are the building blocks of the diverse physical universe can be shown mathematically to be the expression of one self-interacting Unified Field, which is therefore "the ultimate source of order in the universe." [60, p.79]

This description, Maharishi continues, is similar to that which is available in the ancient Vedic wisdom presented as Maharishi Vedic Science:

Both understandings, modern and ancient, locate the unified source of Nature's perfect order in a single, self-interacting field of intelligence at the foundation of the Laws of Nature. This field sequentially creates, from within itself, all the diverse Laws of Nature governing life at every level of the Universe. [60, p.79]

In the standard model of science, theory is open to intersubjective testing [35]. Maharishi Vedic Science has its own systematic methodology of investigation, which is open to anyone with suitable training. This is the Transcendental Meditation technique, a simple, natural, effortless technique which "systematically takes the mind to the source of thought, the pure field of creative intelligence." [57, p.471] It is supplemented by advanced techniques, as is discussed in more detail below. Maharishi summarises the structure of Maharishi Vedic Science as a science in this way:

Progress depends on new discoveries. The objective approach of modern science, having glimpsed the Unified Field of all the Laws of Nature, has invited scientists to transcend the objective approach and be guided by the theories of consciousness available in the Vedic Literature, and adopt a new experimental methodology using the subjective approach that is now readily available through my Transcendental Meditation, its advanced techniques, and the TM-Sidhi Programme. [60, p. 266]

In Maharishi Vedic Science it is thus the human mind that becomes the vehicle for the systematic subjective investigation of the Unified Field which is the source of order in the universe: "When human awareness settles down through my Transcendental Meditation, it identifies itself with this level of reality..." [60, p.498] This level of experience is described as a fourth state of consciousness, Transcendental Consciousness [60, p.455]. The self-interacting dynamics of the Unified Field described by Maharishi above are then open to direct experience. [60, pp.498-9]

Maharishi Vedic Science demonstrates that these self-interacting, or self-referral, dynamics of the Unified Field,

given mathematical form in unified quantum field theories, are the essential content of the Veda and Vedic Literature. Maharishi writes:

In my Vedic Science, these same fundamental laws—the Constitution of the Universe—are found in the eternal, self-referral dynamics of consciousness knowing itself. This eternal dynamics is embodied in the very structure of the sounds of Rk Veda, the most fundamental aspect of the Vedic Literature. [60, p.80]

Maharishi explains that Rk Veda thus presents the self-referral structure of the Unified Field, understood as a field of intelligence, or consciousness; the different branches of the Vedic Literature display its structuring dynamics. [60, pp.172-3] In Maharishi Vedic Science, taken together these are termed by Maharishi the "Constitution of the Universe":

The laws governing the self-interacting dynamics of the Unified Field can therefore be called the *Constitution of the Universe*—the eternal, non-changing basis of Natural Law and the ultimate source of the order and harmony of throughout creation. [60, p.80]

The Unified Field is thus described as total Natural Law from which the emergence of the different levels of the universe is organised and sustained:

From its eternal, self-referral, unified state of pure intelligence, the total potential of Natural Law organizes the system of emergence of different Laws of Nature...This is the Unified Field of Natural Law from where all the Laws of Nature emerge and govern the universe. [60, pp.15-16]

Maharishi Vedic Science gives a comprehensive and rich account of the self-interacting dynamics of this field of pure intelligence by which the diversity of the observable universe and the laws that govern it are evolved from it. [60, pp.254-67]¹ This is explicitly an account of the whole, of the unified level of Natural Law giving rise to and governing the diversified levels of nature and of natural law. A precise parallel, Maharishi points out, can be demonstrated between the sequential unfoldment of unity into diversity displayed in the mathematics of unified quantum field theories (the Lagrangian of the Superstring) and the structure of the self-referral dynamics of the Unified Field described in Maharishi Vedic Science. [60, pp.108-9]

Two analogies are given by Maharishi to present this structure in vivid form. One analogy is that of the tree and the sap that sustains it:

One basis of all expressed values of the tree—the intelligence of the SAP—which is like the consciousness of the tree—the transcendental reality of the tree—the Unified Field of all the Laws of Nature that are at the basis of all expressions of the tree—the self-referral WHOLENESS of the tree... [60, p.247]

A second analogy is that of the role of DNA in the cell and the physiology:

¹ Maharishi's great teaching of this theme can be found in all its detail in the books referenced. It is a theme of great richness: it deserves its own full treatment, which goes beyond the purposes of this article. It is thus referred to in outline here, but not detailed.

Administration in Nature is demonstrated in the functioning of DNA, which promotes RNA (various types) in an ever-evolving mood until the impulse of knowledge—the impulse of consciousness (RNA)—transforms itself into material particles (protein) and continues to evolve into the different aspects of the physiology. In this way every particle of the physiology is always enjoying evolution by virtue of its connectedness with its source, the DNA. [60, pp.20-21]

3.2. Levels of Natural Law

Maharishi speaks of the organization of the universe as the “administration of Natural Law”. [60, p.4] This is “Nature’s Intelligence”: it is... the spontaneous display of the organizing power of Natural Law—Cosmic Creative Intelligence—which:

- (1) Maintains everything and everyone in the evolutionary direction.
- (2) Maintains integration of all diverse values and at the same time allows every value to evolve into more expressed values. [60, p.20]

The term ‘evolutionary’ is used here in a specific and technical sense. At the level of the Unified Field, in the self-interacting dynamics of pure intelligence, diversity is held in terms of unity, and is therefore fully integrated and balanced. Where connectedness with this source is maintained as the

different levels of creation emerge, these qualities are reflected in their functioning:

Here is the reality of perfect administration—maintenance of the evolution of diverse values on the basis on natural connectedness with their source in the self-referral, silent state of eternal Unity. [60, p.5]

That ‘natural connectedness’ results in individual life becoming “spontaneously in accord with Natural Law” [60, p.84]; that is, governed by the integration and balance with characterises the evolutionary quality of the Unified Field. Conversely, loss of that natural connectedness results in “violation of Natural Law”: this results in the loss of integration, balance and orderly development of life. It is ultimately understood to be the source of any problem at any level of life. [60, p.278, pp.440-441]

From this perspective the imbalances and degradation of systems that characterise the climate change problem have their root in violation of Natural Law and loss of connectedness with its holistic source. How natural connectedness, and therefore life in accord with Natural Law, is restored by the technologies of Maharishi Vedic Science is the theme of the next section.

Maharishi Vedic Science presents a compact model which identifies eight levels of the administration of Natural Law [60, pp.22-28]:

Table 4. *Eight Levels of the Hierarchy of Administration of Natural Law in Maharishi Vedic Science.*

Levels	Name and Scope	Description
FIRST LEVEL	The Unified Field of All the Laws of Nature	“Holistic administration of the ever-expanding universe through the intelligence of pure knowledge, which has infinite organising power—the source of all dynamism of the ever-expanding universe, which perpetually maintains order in the universe.” [20, pp.23-24]
SECOND LEVEL	Parts of the universe: galaxy, solar system.	“Administration of the parts of the universe, which are governed by specific Laws of Nature, like the specific law governing any galaxy or solar system...” [60, pp.24-25]
THIRD LEVEL	Life on earth: natural systems.	“Administration of life on earth—administration of specific lives of animals, birds, trees, etc...” [60, p.25]
FOURTH LEVEL	Human life on earth: culture and society.	“Administration of the holistic value of human life on earth...The Laws of Nature that administer life in each part of the globe—the Natural Laws of the Land, which give rise to specific cultures of the land.” [60, pp.25-26]
FIFTH LEVEL	Individual life: human physiology and psychology.	“The Laws of Nature that administer specific values of individual life.” [60, p.26]
SIXTH LEVEL	National life.	“Administration of the whole nation through man-made law based on the man-made constitution of every country.” [60, p.27]
SEVENTH LEVEL	State and provincial life.	“Administration of the states or provinces of the nation based on their own man-made constitutions.” [60, p.27]
EIGHTH LEVEL	City and town life.	“Administration of cities and towns based on their own man-made constitutions.” [60, pp.27-8]

A central element of this hierarchy is its emergent organization, according to which each level is governed by its own level of Natural Law and by that of preceding levels. Thus, Maharishi explains, Level 2 is governed through Natural Law also by Level 1; Level 3 is governed through Natural Law also by Levels 1 and 2; and so on. It is precisely this structure of internal connectedness through Natural Law which presents the structure of diversity in terms of the whole. Crucially, for the theme of this paper, it opens the possibility of managing the parts by managing the whole from the level of the Unified Field:

For any administration to be perfect it must always maintain connectedness with the supreme level of

hierarchy of administration, the source of all the Laws of Nature that uphold all different levels of hierarchy of administration. [60, p.28]

If this might prove possible to achieve in practice, it seems to offer a wholly new way forward in meeting what has been identified as the central challenge of the climate change problem: how to manage physical and human systems of unimaginable size and complexity in a fully coordinated way and in terms of the whole. Under the ‘Eight Levels of the Hierarchy of Administration of Natural Law’ model proposed by Maharishi Vedic Science, the following practical possibilities appear to be opened:

1. The model presents a nested structure, whereby

operating at the first level, the Unified Field of All the Laws of Nature, is predicted to influence fundamentally all subsequent levels, which include both physical and human systems.

2. Because the internal structure and function of the Unified Field, which contains in potential and unmanifest form the manifest diversity of the universe [60, p.2, pp.11-12], is understood to be inherently fully balanced, integrated, and evolutionary² an influence from this level is predicted to restore these qualities in the elements and systems of all subsequent levels. Each element and system is predicted to be supported in its natural and balanced function, and to be coordinated with the functioning of every other element and system, both physical and human.
3. This one strategy, of connecting each of the parts of each level with the Unified Field of All the Laws of Nature, is predicted to establish the condition described in Maharishi Vedic Science as “life in accord with Natural Law” in each system. Conversely, it is predicted to eliminate violation of Natural Law by human populations and the problems which arise from it—problems which together lie at the root of the climate change problem. This approach Maharishi has termed the “Principle of the Second Element”. [57, p.126]

Thus the task of handling all eight levels simultaneously—the central challenge of the climate change problem—promises, under this approach, to be radically simplified. What is required is first and foremost the knowledge of how to operate from the level of the Unified Field of All the Laws of Nature. We turn now to the possibility of achieving this goal in practice, through the technologies and programs of Maharishi Vedic Science.

4. Part Three: Applications of Maharishi Vedic Science

4.1. Technologies of Maharishi Vedic Science

As is the case with any true science, Maharishi Vedic Science includes technologies through which its principles are applied. [60, p.396] These are the programs referred to by Maharishi above: the Transcendental Meditation technique, its advanced techniques, and the TM-Sidhi program. So far these programs have been discussed in terms of their role as experimental methodologies of Maharishi Vedic Science, which support its scientific status. In this section we examine their role in directly operating from the level of the Unified Field to enliven wholeness simultaneously at each of the eight levels of administration of Natural Law. We refer to the substantial scientific research program which has documented the practical effectiveness of the technologies of Maharishi Vedic Science. In the final section, we discuss the ways in which this approach meet the requirement for a

“science of the whole” in handling the climate change challenge; an approach, moreover, which can support localised strategies across otherwise fragmented environmental and human systems.

As introduced above, Transcendental Meditation is a simple mental technique which allows the conscious mind to identify itself with the Unified Field of All the Laws of Nature in Transcendental Consciousness:

My Transcendental Meditation is a simple, natural, effortless procedure whereby the mind easily and naturally arrives at the source of thought, the settled state of mind—Transcendental Consciousness—pure consciousness, self-referral consciousness, which is the source of all creative processes. [60, p.280]

Transcendental Meditation is the Technology of Consciousness, which is the most basic element of life—the home of all the Laws of Nature. [60, p.283]

Transcendental Meditation can be learned by anyone, irrespective of their cultural, religious, or educational background. [60, pp.281-3] As noted, this supports its intersubjective character which is a standard requirement for scientific investigation.

The TM-Sidhi program is an advanced program of Transcendental Meditation. Maharishi explains that whereas Transcendental Meditation opens the Unified Field to the conscious mind, the TM-Sidhi Program develops the ability to operate from that level:

The TM-Sidhi Programme is an advanced aspect of Transcendental Meditation. It trains the individual to think and act from the level of Transcendental Consciousness, greatly enhancing the co-ordination between mind and body, and developing the ability to enliven Natural Law to support all avenues of life to fulfil one’s desires. [60, 308]

A key term here is ‘enliven’. Maharishi elaborates on this mechanism in terms of attention: Transcendental Meditation “takes the attention to Transcendental Consciousness and enlivens the total potential of Natural Law in the conscious mind of everyone.” [60, 303] This enlivenment of total Natural Law, with its internal structure of order and balance, is predicted to benefit all areas of individual life:

The experience of Transcendental Consciousness develops the individual’s latent creative potential, while dissolving accumulated stress and fatigue through the deep rest gained during the practice. This experience enlivens within one’s awareness creativity, dynamism, orderliness, and organizing power, which results in increasing effectiveness and success in daily life. [60, 281]

Positive benefits of just this kind in the physiology, psychology and sociology of individual life are precisely what scientific research which tests this comprehensive prediction has demonstrated. The Transcendental Meditation and TM-Sidhi program has been the focus of a scientific research program extending over more than four decades. More than 600 studies have been conducted at over 250 independent universities and institutions in 33 countries, with the majority of these studies published in independent, peer-reviewed journals. [74, 75]

² These three qualities are part of the set of qualities of the Unified Field that are described in Maharishi Vedic Science. [60, p.105]

In physiological research, for example, unique levels of rest, accompanied by more orderly brain functioning, have been consistently associated with the practice of these programs. Outside the meditation period effects include reduction of physiological stress and maintenance of greater EEG coherence. Large health insurance studies have found significant reductions in health care utilization and in heart diseases and cancer. Correlations with life expectancy and well-being have been demonstrated. In psychological research, measures such as field independence, creativity, memory, intelligence, ego development, moral reasoning, and self-actualization have been found systematically to improve with the practice of these programs. [2, 3, 4, 22, 84]

In the context of the 'Eight Levels of the Hierarchy of Administration of Natural Law' model, findings such as these, taken together represent a comprehensive test and a significant level of verification of one specific level of the model: Level 5, "The Laws of Nature that administer specific values of individual life." The remarkably broad scope of the experimental findings here are consistent with the description provided by Maharishi Vedic Science of: (1) the existence of the Unified Field underlying and giving expression to all aspects of individual physiology and psychology; and (2) of their simultaneous enlivenment through the technologies of Maharishi Vedic Science which operate at that level.

4.2. The Technologies of Maharishi Vedic Science: The Field Effect

As has been outlined, Maharishi Vedic Science presents the fundamental level of Natural Law as a field of pure intelligence that is fully unified. The description of this field from the perspective of modern physics provides an important insight: "At the scale of Super Unification (Physics) all aspects of Natural Law at every point in the universe become infinitely correlated with each other." [60, p.515] This seamless correlation has two important implications. The first is that at this level the individual laws of nature that govern the different levels and elements of the universe, both physical and human, are seen not only as unified but as indivisibly connected to the whole, and therefore to its properties of integration, balance, and evolutionary development:

Every single Law of Nature functions in accordance with the holistic value of Natural Law, and this is how order is maintained through the evolutionary direction of the invincible organizing power of Natural Law. [60, p.515]

A second implication is that operating at that level is unlimited in its influence:

A delicate impulse at any one point in space and time can create a precipitous change throughout the entire universe. This long-range correlation explains how action on the level of the Unified Field, at the scale of Super Unification (transcendental field of intelligence), can have a profound influence that can spread anywhere and everywhere throughout the universe. [60, p.515]

Such an impulse, Maharishi explains, is precisely what occurs naturally and spontaneously in the practice of the

technologies of Maharishi Vedic Science. As the conscious mind identifies itself with the Unified Field of Natural Law in Transcendental Consciousness it enlivens the Unified Field and all its qualities everywhere. [60, pp.381-2 FN, p.383]

This is identified as a "field effect" and in this context is called the *Maharishi Effect*. [60, pp.313-320, p.383] It predicts that the practice of Transcendental Meditation by even a small percentage of a population has measurable benefits for the population as a whole and for its environment.

This field effect is predicted to strengthen with the advanced techniques of Transcendental Meditation, and in the TM-Sidhi program, particularly its most advanced element, Yogic Flying:

Yogic Flying is a phenomenon created by a specific thought projected from Transcendental Consciousness, the Unified Field of Natural Law, the field of all possibilities... Yogic Flying demonstrates perfect mind-body coordination and is correlated with maximum coherence, indicating maximum orderliness of brain functioning. [60, pp.308-11; 78]

Most powerful of all is the effect created by the practice of group Yogic Flying:

In this way the phenomenon of coherence of groups of Yogic Flyers spreads, neutralizing the negative tendencies in the whole society. [60, p.516]

In the context of the 'Eight Levels of the Hierarchy of Administration of Natural Law' model, then, the prediction of the principles of Maharishi Vedic Science is unambiguous: all expressed levels of Natural Law can be influenced simultaneously and positively from the one fundamental level of the Unified Field of Natural Law through the technologies of Maharishi Vedic Science:

...Transcendental Meditation (which) offers to enliven the field of consciousness through the experience of sequentially evolving levels of consciousness, from the unmanifest field of the total potential of the organizing power of Natural Law to all the different levels of evolution of Natural Law responsible for the evolutionary process of the whole field of consciousness—from the singularity of consciousness in the unmanifest field of self-referral consciousness to all fields of manifest creation. [60, pp.279-80]

In particular, these levels are predicted to include not only Level 5, 'Individual Life', but the collective human systems of Level 4, "Culture and society", Level 6, 'National life', Level 7, 'State and provincial life', and Level 8, 'City and Town life'. Remarkably, there is robust scientific evidence for the validity of these claims. To that evidence we now turn.

The practice of the Transcendental Meditation and TM-Sidhi program over the past decades has provided multiple sites to test the predictions of the Maharishi Effect, at different scales and over different time periods. The high-level prediction is that greater order, or coherence, and less disorder will be seen across measures of the quality of social life, as a consequence of the field effect generated by these

technologies.

The primary statistical technique employed to test this prediction has been time series analysis, which can be used to model the effect of intervention events on baseline measures [9]. High levels of statistical significance have been found in many published studies, supporting the existence and the scope of the Maharishi Effect. At the city, state and national levels, where level of practice of these technologies have exceeded threshold levels of the population (1% for Transcendental Meditation, $\sqrt{1}\%$ for groups practicing the TM-Sidhi program [60, pp.313-317]) increases in quality of life have been found in many published studies in such measures as crime rates and accident rates. One major study of 160 US cities, for example, controlling for demographic variables known to influence crime, found a significant reduction in crime trend from 1974 to 1978 in proportion to the number of people in the city who had learned the Transcendental Meditation technique by 1973. [20]

Where larger groups have practiced these technologies over a period of time, effects at the national level have been demonstrated, with fewer violent deaths due to homicides, suicides, and traffic fatalities, a reduction in unemployment and inflation and a general improvement in quality of life [5, 13, 21]. Where a group has approached, at various times, the $\sqrt{1}\%$ of the world population, studies indicated that international relations improve and regional conflicts decrease [19, 33, 34, 74].

Remarkable as these findings are, the statistical rigour of the analyses underpinning them is robust, as demonstrated in their consistent publication in high-ranking, discipline-specific, refereed journals. These findings are consistent with the predictions of the 'Eight Levels of the Hierarchy of Administration of Natural Law' model, and particularly, as noted with predictions associated with Levels 4, 6, 7, and 8.

5. Conclusion: Maharishi Vedic Science and the Response to Climate Change

The central proposal of this article is that the principles and practice of Maharishi Vedic Science offer promise of a new and fundamental contribution to the global response to climate change. The main lines of reasoning and evidence we have presented to support this proposal can be summarised as follows:

1. Climate change has been conclusively demonstrated to be producing changes of vast scale and scope across the climate system, biological systems, and human systems in all parts of the world. Changes are cascading across global systems, from physical climate to intermediate biological systems to human systems. Most of these cascades have not been identified, described, or measured. Recent reports, from 2016 and 2017, confirm that these changes are widening in scale and scope.
2. These changes carry high levels of risk for the integrity of unique ecosystems and cultures; in the impact of

extreme weather events; in increasing the vulnerability of already disadvantaged populations; in the global impact to biodiversity, ecosystem services, and the global economy; and in non-linear trends approaching often unknown thresholds and movement across them to irreversible changes.

3. The complexity, interconnectedness and uncertainty of the climate change challenge is unprecedented. Modern technical methods, such as reductionist approaches, systems analysis, uncertainty and complexity modelling, wicked problem analysis, and root cause analysis, have in consequence achieved only limited advances in meeting the challenge.
4. A key missing element of these analyses has been identified to be a systematic way of addressing not only specific parts of the global climate system but the whole. No effective modern theory or practice has been advanced, accepted or implemented for the scale and scope required across these global physical, biological and human systems taken as a whole.
5. Maharishi Vedic Science offers to meet this critical gap of theory and practice. It locates a Unified Field of Natural Law at the basis of all the diversity of the universe; a perspective which finds a parallel in the unified quantum field theory of modern physics. It further offers a systematic methodology, open to anyone, to experience the Unified Field at the source of thought within their own awareness. This is Transcendental Meditation, the first technology of Maharishi Vedic Science.
6. Maharishi Vedic Science describes in detail how diversity emerges from the fundamental field of unity. The self-referral structure of this field of pure intelligence, which is open to itself, and its self-interacting dynamics organizes the emergence of the different laws of nature that govern the universe. This is explicitly an account of the whole, and of diversity in terms of the whole.
7. These profound principles of Maharishi Vedic Science are formalized in the 'Eight Levels of the Hierarchy of Administration of Natural Law' model. This model displays the natural connectedness that exists between the different levels of diversity, both natural and human, and their source. This connectedness is a consequence of the nested nature of the model: all levels are, ultimately, expressions of the first level, the Unified Field of All the Laws of Nature.
8. Where that connection is intact, the qualities of balance, integration, unity, and evolution that are inherent in the Unified Field of Natural Law are fully expressed in the diversity at any level and at all levels simultaneously. This is "life in accord with Natural Law". Where that connection is not available, violation of Natural Law, with its attendant environmental problems and human suffering, results.
9. The model predicts that if it were possible to operate from the level of the Unified Field, wholeness would

be enlivened simultaneously at all eight levels of Natural Law. The technologies of Maharishi Vedic Science—the Transcendental Meditation and TM-Sidhi program, including Yogic Flying—are shown to provide that capability.

10. A long-term, substantial, published scientific research program has confirmed the existence of predicted benefits on the level of the individual, which is Level 5 of the model. Multiple studies of physiological, psychological and social functioning provide robust evidence of more balanced, integrated and healthy states for individuals as a result of the practice of the technologies of Maharishi Vedic Science.
11. Maharishi Vedic Science further describes the field effect—the Maharishi Effect—which occurs on the level of the Unified Field as a result of its enlivenment through the technologies of Maharishi Vedic Science. This effect results in the long-range correlation of the diverse elements of Natural Law at that level. The prediction then arises that all seven expressed levels of the model, both physical and human, can be enlivened in more orderly and evolutionary directions from the one fundamental level of the Unified Level of Natural Law through the technologies of Maharishi Vedic Science.
12. A substantial published scientific research program has provided clear support for this prediction and for the existence of the field effect. Measures of quality of life, across a wide social and economic scope, including environments of great disorder, have been shown to benefit systematically and significantly when thresholds of group practice of the technologies of Maharishi Vedic Science are reached. Studies have indicated these outcomes at city, state, national and international scales, consistent with the predictions of the model for Levels 4, 6, 7, and 8.

We therefore propose that Maharishi Vedic Science, with its unparalleled body of principles and practice supported by robust research findings, offers to meet the demand of climate change theory, practice, and governance for a systematic approach to the whole global system, and of its sub-systems in terms of the whole. The ‘Eight Levels of the Hierarchy of Administration of Natural Law’ model is unique in its coverage of the scope and scale of the climate change challenge, at all levels, across physical, biological, and human systems. Most significantly, it includes technologies by which, operating from the fundamental and unified level of life, the level of the Unified Field of Natural Law, all levels can be placed simultaneously on a platform of balance, integration and orderly development. This is proposed to bring life into accord with Natural Law, reducing, and ultimately eliminating, violation of Natural Law, which, across its multiple dimensions, emerges as the climate change problem.

On the individual level—Level 5 of the model—the predictions of Maharishi Vedic Science are for individual life to become increasingly in accord with Natural Law; and we

have reviewed some of the extensive research findings which support this view. It is not unreasonable to extend that prediction to individual behaviour which relates to climate change. For example, it might be predicted that consumer choices will be more aligned with behaviour which reduces climate change impacts. Here is a clear area for future research.

Since climate change is a global problem, however, in the end it can only be met by the international community of nations acting together. Maharishi Vedic Science explains that the field effect extends to the actions of government, by virtue of the structural organization of individual life, national life, and government:

Every decision of government is the expression of national consciousness. National consciousness governs the activity of every nation in the same way that the consciousness of the individual governs the activity of the individual. Since national consciousness is the collective consciousness of all the individuals of the nation, it is ultimately the consciousness of the individual that is the prime mover of the nation and shapes its destiny. [60, p.61]

Maharishi explains that the field effect influences and supports government through the agency of greater coherence in collective consciousness. The ‘Eight Levels of the Hierarchy of Administration of Natural Law’ model therefore predicts that at the national and international level the practice of the technologies of Maharishi Vedic Science, even by a small group, can create the underlying conditions for more effective action. [60, pp.317-8] Thus, for example, at the national level greater cooperation between public interests, private interests, and government in developing and implementing national climate change initiatives is predicted to be observed. At the international level, not only is greater cooperation between sovereign governments in the climate change Conventions predicted but also a stronger commitment by them to secure agreed emissions targets. The success of the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer [104] in achieving a steady reduction in ozone depletion in the atmosphere shows how effective such Conventions can be in improving the climate system. [103]

Particular mention should be made of Level 3 of the model, which relates to the natural systems of life on earth: “Administration of life on earth—administration of specific lives of animals, birds, trees, etc...” [60, p.25] Clearly this has direct relevance to the impacts of climate change on global biological systems, as discussed above. So far, perhaps given the relatively recent emergence of climate change research, the scientific research programs on Maharishi Vedic Science have not extended to predictions at this level. However, the internal logic of the model, together with its strong experimental support at other levels, makes it reasonable to propose as a working hypothesis for future research that the benefits of the technologies of Maharishi Vedic Science extend to these systems. In this context a prediction of some five decades standing made by Maharishi is worth citing: activity from the level of the Unified Field, Maharishi

explains, "... produces a life-supporting influence in every field of creation and as a result the whole of nature remains harmonious. The sun shines in due time, rain falls in due time, and all the seasons remain regular." [57, p.204]

It is for researchers to take up the task of expanding what is already a substantial research base into these arenas.

There is no intention in the approach of Maharishi Vedic Science to replace the existing approaches for mitigation and adaptation that are being developed and are already operating in different parts of the world and in different sectors. On the contrary, Maharishi Vedic Science offers to enhance and support these programs through its technologies. It should be noted also that Maharishi Vedic Science offers additional programs which are focused on different sectors relevant to the climate change problem, such as Maharishi Vedic Organic Agriculture and Sustainable Architecture and Town Planning. [26, 47]

We conclude by noting, in the spirit of the internationally-accepted Precautionary Principle [109], that action to prevent or remediate avoidable harm which can be undertaken should be undertaken. The theory and evidence reviewed in this article suggest the value for the international community of taking advantage sooner rather than later of the promise of the technologies and programs of Maharishi Vedic Science, to assist materially, and fundamentally, in meeting the global climate change challenge.

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