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ESG Knowledge Map Overview

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Abstract

Starting the human knowledge map, the recent media reports from the chaotic political situation around the world, greedy economic development, unstoppable epidemic shock, to the shortage of container shipping, all kinds of goods broken chains and natural and man-made disasters everywhere, this scenario seems to be in the East and West are legendary revelation. However, there are still many well-intentioned preachers who, at the curatorial level of scientific knowledge, carry out a wide range of curatorial activities on issues such as human harmony with nature, social systems, climate change, global warming, mitigation & adaptation, and the governance of organization. It may be collectively known as ESG: Environment, Social, and Governance. This article aims to integrate on the curatorial platform of various organizations shared by everyone, each of which speaks its own way, and chooses what it needs from all walks of life. Take scientific argumentation as the basis, practice application as the goal, system integration as the means, pragmatic benefits as the inducement, and sustainable development as the good result. By this attitude portrays it as an "ESG knowledge map overview".

Keywords: Human knowledge; Knowledge map; ESG; ESG-Integrated management systems; Climate change

Wellspring

On August 29, 2020, the "Zhong Dao Leadership & Culture and Corporate Excellence Management Seminar" was organized by the Zhong Dao Association of Leadership & Culture (ZDALC) and the Chinese Society for Quality (CSQ), Dr. Chen Shu, Chairman of ZDALC, delivered a keynote speech on the topic of "Deepening Corporate Governance and Social Responsibility in Corporate Culture," shown as Figure 1, Lu Robert (from left), Vice Chairman of Kenmec Machinery, Yang Jinzhou, President of CSQ, Wang Xifu, President of Taipei University of Science and Technology, Chen Shu, Chairman of ZDALC, Chen Jieshan, Secretary General of CSQ, and Zhou Minghong, Secretary General of ZDALC. The following is partial content of his speech (Figure 1).

People's mind, thinking, words and deeds must follow the Zhong Dao; "Dao" is a set of concepts in the individual, and the way that brings people together becomes "culture". So, in short, if everyone has the "Zhong Dao" in his heart, what they achieve together is to have in the organizational culture of the Zhong Dao, if the leader has a "Zhong Dao" in his heart, then the direction he will lead is to move forward on the road of long-term governance and stability. In general, "Zhong Dao" means the way of leadership. "People today cannot see the ancient moon, but today moon once shone the ancients."

Figure 1: *Zhong Dao Leadership and culture and corporate excellence management seminar.*

Chen Shu said, the sun and the moon are like the unchanging ways of constant ancient, the chaos of people's minds is the ignorance of the sun and the moon and this will naturally lead to chaos in the world. On the contrary, if you clarify the mind and distinguish the truth, the Daoism will naturally connect the whole world. Under the impact of the epidemic of COVID-19, the performance of the global economy is not good, but it must be thinking deeply that the earth should be avoided not be beautiful anymore. Chen Shu believes that human beings are greedy for comfort and are harming other species and ruining the living environment. Nature is one with human beings and everything, not hurting others is not hurting oneself, and all the core comes from the human heart, with the "Zhong Dao" as the main principle, not to be partial, but also to find the best choice for various causes and circumstances. Dr. Chen Shu pointed out that using scientific leadership and management to shape the "Zhong Dao" culture, in the upper level, it is necessary to construct a vision that is both competitive and attractive, to carry the mission of peace for all generations, to foresight, perseverance, and to sincere cooperation and in high-quality competition; in the foundation level, it is the innovation of technological capabilities, the cultivation of talents and the pursuit of excellence; in the individuals level, it is the ethics between individuals and families and organizations. The core concept is the key to concentricity, like the trunk of a big tree, and its branches and leaves are like open sunshine and air; competition and cooperation are like the soil; integrity is like the root of a big tree; and excellence and innovation are like flowers and fruits, it depicts as Figure 2 and calls "Zhong Dao Ethical Tree". Chen Shu emphasized that the "Zhong Dao" is a combination of scientific phenomena and philosophical thoughts and ontological nature; it is a fusion of technical and mental methods; it is very inspired as Figure 3. If you can experience and apply them, you can grasp the key to success for both individuals and enterprises (Figures 2,3).

Figure 2: *Zhong Dao ethical tree.*

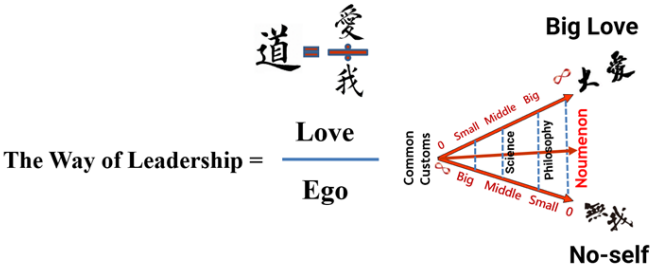

Figure 3: *The way of leadership=Love/Ego.*

Although the development of modern quality professional fields, were originated from the requirements of the procurement of US. Department of Defence during the World War II, but some of useful philosophies, systems, technologies, methodologies and tools, were promoted by many quality gurus and organizations to the different organizations widely, such as governments, industries, enterprises, schools, hospitals…etc., most of them can get the value-added effectiveness. Furthermore, it induces some safety, health, environment, ecology, social accountability issues, and try to let the economic production, ecological environment and people's life to enhance the upward balance. When we discuss the issue of economic and social development of a country, with quality as its topic, it will get less controversy in ideology. The quality of the subject to the "essence of substance" requirements are precise, accurate and reliable; to the "process of business" focus on efficiency, effectiveness and value; to the "conduct oneself" emphasis on words and deeds should be consistent; to the "quality of life" pursue the balance of production, ecology, and life; to the society "Datong (The Ideal World)" is our dream. The above is the basis for the quality issues that the author has relied on for many years. It has been in place for many years, especially "Datong (The Ideal World)". These great principles are still in secular slogans and it is difficult to implement them into the heart. To use an ancient Chinese poetry: "In the crowds look for him a thousand times, suddenly looking back, the person who we look for is before us." Until the magical interpretation and experience of "Zhong Dao": "Zhong Dao"is the way that can be consistent; the size of the way is the degree of awareness and equal to love/ego; the interpretation of secular, scientific, philosophical, and noumenon; the relevance of noumenon and ego, as shown in Figure 3. Inspired by the big love without self of "Zhong Dao", discussing the connotation of the levels according to the "Zhong Dao", starting from the levels of scientific phenomenon, philosophical thinking, and ontological self, starting with corporate leadership training and corporate culture transformation, and then gradually promote it to academics, education, politics and economics, and all walks of life. It is expected to be of great help to the promotion of corporate culture, politics and economics, and social culture. The ISO 9000 series

has undergone several revisions and promotions, and has now moved from the perspective of sustainable operation and management to the integration of overall development gradually. This sustainable development system architecture is based on the three major aspects of economy, ecology and society to form a Sustainable Development Architecture. It not only hopes to be compatible with the system, but also strikes a balance between professional and industry requirements. In the future, the integration of management systems of enterprises needs to be taken into account, which can be called the "ESG - Integrated Management Systems." (Figure 4).

Figure 4: *ESG - Integrated management systems.*

ZDALC's "Leadership Culture" is injected into CSQ's "ESG-Integrated Management Systems", as if the body is infused with aura; the aura is attached to the body; and the "Zhong Dao Ethical Tree" can be achieved (Figure 5).

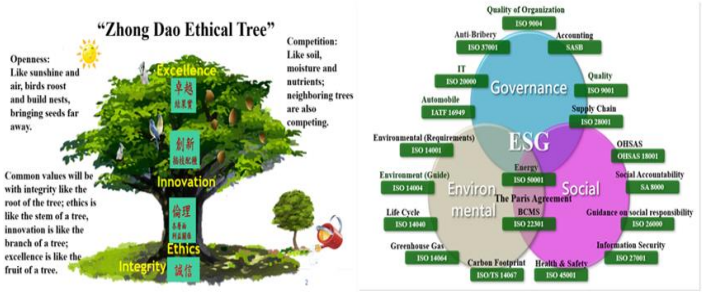

Figure 5: *ESG - Integrated Management Systems vs. Zhong Dao Ethical Tree.*

The Relationship between Human and Nature

Since ancient times, there have been views that put human against nature, especially in modern society, human's ability to transform nature has been rapidly enhanced, often putting themselves on the opposite side of nature, claiming to conquer nature. In the article "The Role of Labor in the Transition from Ape to Man", Friedrich Engels (1820-1895) makes a systematic exposition and scientific argument on the decisive role of labor in human origin. He recounted it in Darwin's "The Descent of Man, and Selection in Relation to Sex" explains that labor and nature together are the source of all wealth, nature provides materials for labor, and labor turns materials into wealth [1].

Finally, Engels expounds the fundamental difference between human and animal in the relationship with nature, which is that man can use nature according to his own purpose, and be able to understand and apply the laws of nature. At the same time, it is emphasized that the relationship between human and nature must be properly handled, warning mankind do not to revel too much in the triumph of nature, pointing out that for every such victory, nature retaliates against us. Engels deeply exposed the capitalist class purely for direct profit production and exchange, regardless of the indirect and long-term impact of production activities, and thus inevitably caused the deterioration of the ecological environment and the destruction of natural resources. He stressed that in order to understand and make rational use of the laws of nature, and strive to control and regulate the influence of production activities on the natural world, in order to achieve this goal, it is necessary to completely change the capitalist mode of production and the whole social system. The above discussion thus gave him a theoretical basis for the struggle against capitalism, leading the international workers' movement, and advocating communism. In fact, after more than a hundred years, the struggle between communism and capitalism is not over, which is a political issue between countries. The leadership of each country takes the interests of its own country as the priority policy of governance, just like between people, people with personal interests as the priority then easily induce conflicting and fighting, between countries is war; people get along with each other for a long time, the common interests will become a tribe, become a country; when countries get along for a long time, the common interests will form a federation or alliance. In socialism and capitalism, socialism is not a box office poison; capitalism is not a magic bullet, they cannot eliminate anyone, today they have been you already have me and I have you, if they can be a mirror for each other in the future, perhaps for the benefit of mankind more.

Climate change – an Issue that All Humanity should face

In order to create a harmonious world between human and nature as a core value, in today's social development should be no longer to argue about the attitude of life, if so, there are many issues worth exploring. First of all, the factors affecting climate change come from many aspects, including solar radiation, changes in the earth's orbit, mountain-building movements, and greenhouse gas emissions and so on. Because many of the factors on the earth's

surface that indirectly affect climate react more slowly, such as changes in ocean temperatures and melting icebergs, climate change may take centuries or even longer to emerge. Most of the natural factors have been explored in the relevant scientific fields, and there are still many open issues, but modern scientific research suggests that human activity has caused global temperatures to rise rapidly in recent decades, as shown in Figure 6. There is no debate in academia and consensus has been reached, with more than 97% of climate scientists saying: Global warming exists and human activity is most likely the main cause of global warming. Humanity should therefore minimize its climate-affected activities and seek to eliminate the consequences that have been caused [2] (Figure 6).

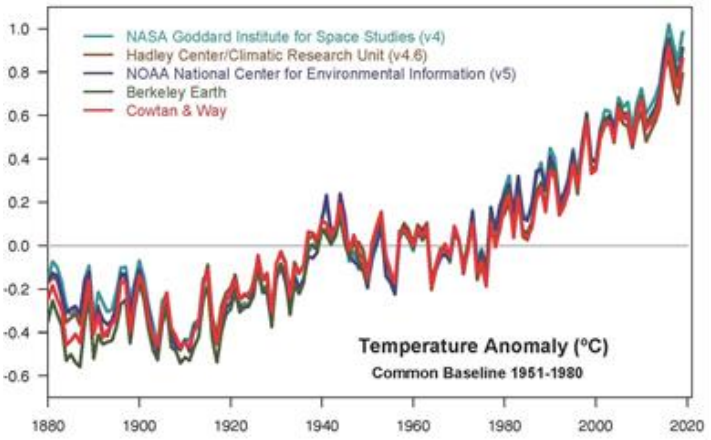

Figure 6: *Global temperatures to rise rapidly in recent decades.*

Factors of human activity affecting climate are the burning of fossil fuels, the manufacture of cement, land use, ozone layer destruction, livestock and agricultural activities, deforestation, etc., and then release of large amounts of CO2 and dust, they will have different effects on the climate, and become factors in climate change. In 1988, the United Nations, in collaboration with the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP), established the Inter-Governmental Panel on Climate Change (IPCC), an inter-governmental organization affiliated with the United Nations. IPCC specializes in the study of climate change caused by human activities; its membership is limited to Member States of the WMO and the UNEP. The author collects and collates the relevant information and compiles (Table 1).

The United Nations Framework Convention on Climate Change (UNFCCC), an international convention adopted at United Nations Headquarters in New York in May 1992, was opened for signature during the United Nations Conference on Environment and Development in Rio de Janeiro, Brazil, in June 1992 with the participation of heads of state of the world. On March 21, 1994, the Convention entered into force. Article 2 of the Convention provides that the ultimate objective of this Convention and any relevant legal documents that may be adopted by the Conference of the Parties is to stabilize atmospheric concentrations of greenhouse gases at levels that prevent dangerous anthropogenic interference with the climate system, in accordance with the relevant provisions of the Convention. This level should be achieved within a time frame sufficient to enable ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and that economic development can be carried out sustainably. The Convention does not impose specific obligations on individual Parties, nor does it provide for an enforcement mechanism. In that sense, the Convention lacked legal binding force. However, the Convention provides for mandatory emission limits to be set in subsequent subordination protocols. Parties to the Convention have held annual meetings of the Conference of the Parties (COP) since 1995 to assess progress in addressing climate change. In 1997, the Kyoto Protocol was agreed to make greenhouse gas control or emission reduction a legal obligation of developed countries. In accordance with the provisions of the Bali Road Map adopted in 2007, the COP15 Conference held in Copenhagen in 2009 resulted in a new Copenhagen Agreement. On December 12, 2015, 195 countries adopted the Paris Agreement at the 2015 United Nations climate summit to replace the Kyoto Protocol, hoping to work together to stem the spiraling tide of global warming.

An important milestone in the fight against climate change – The Paris Agreement 2015

At the UNFCCC COP21 conference in Paris, France, in December 2015, the parties agreed to work together in the future to limit the rise in Earth's temperature to a range of up to 2°C compared with the pre-industrial era, a significant climate agreement known as the Paris Agreement. Unlike the Kyoto Protocol, the Paris agreement extends emissions reduction obligations to developing countries such as China and India, and requires developed countries to provide climate change funding to help developing countries reduce greenhouse gas emissions and be able to cope with the consequences of global climate change. It will endeavor to practice the Intended Nationally Determined Contribution (INDC) participation, in the implementation of the objectives set out in UNFCCC Article 2; it is also expected that the amount of greenhouse gases in the atmosphere will be maintained at a level that prevents dangerous man-made interference with the climate system. On October 5, 2016, the parties to the Paris Agreement met the entry into force standard of double 55 (55 Parties signed the agreement and the total carbon emissions of the Parties amounted to more than 55% of the global carbon emissions), the signing period since April 22, 2016, China and other major greenhouse gas emitters also signed on the eve of the G20 in September of the same year, until October 4, the

European Union ratified the Paris Agreement, set a threshold for entry into force, the Paris Agreement on behalf of countries to jointly curb global warming trends, it entered into force on November 4, 2016.

Table 1: *The important activities record of the IPCC.*

Year	United Nations climate change activities
April 25, 1945 The United Nations is formally established	The United Nations Conference on International Organizations was held in San Francisco, with the participation of 50 Governments and a number of non-governmental organizations in drafting the Charter of the United Nations. On October 24, 1945, the charter was formally inaugurated by the then five permanent members of the Council (the French Republic, the Republic of China, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America) and most other 46 signatories.
March 23, 1950 The establishment of the WMO	In September 1947, WMO held a general meeting in Washington, D.C., and adopted the Convention of the World Meteorological Organization, deciding to establish the World Meteorological Organization. On March 23, 1950, the Convention entered into force and the International Meteorological Organization was officially renamed the World Meteorological Organization. In 1951, the World Meteorological Organization became a specialized agency of the United Nations and began operational.
June 1972 The establishment of the UNEP	The United Nations Environment Program, also known as the United Nations Environment Program, was established at the United Nations Conference on the Human Environment in June 1972. It is the permanent department of the United Nations dedicated to environmental planning. Its mandate is to coordinate United Nations environmental plans, to assist developing countries in implementing policies conducive to environmental protection and to encourage sustainable development and promote environmentally friendly measures.
1988 the IPCC was established	The IPCC is an inter-governmental organization affiliated with the United Nations, established in 1988 by the WMO in collaboration with the UNEP to study climate change caused by human activities. Its main work is to publish special reports related to the implementation of the UNFCCC. The IPCC writes assessment reports based on members peer reviewing reports and published scientific literatures.
May 1992 UNFCCC	The United Nations Framework Convention on Climate Change (UNFCCC), an international convention adopted at United Nations Headquarters in New York in May 1992, was opened for signature at the United Nations Conference on Environment and Development, held in Rio de Janeiro, Brazil, in June 1992, with the participation of heads of Government from around the world. The Convention entered into force on 21 March 1994.
1995 Start of UNFCCC Annual Meeting of the Contracting Parties (COP)	Parties to the UNFCCC Convention have held annual conferences of the Parties (COP) since 1995 to assess progress in addressing climate change. With the assistance of the IPCC, the aim was to reach consensus through meetings and discussions on various strategies.
1997 "Kyoto Protocol"	The IPCC assisted countries in drafting the Kyoto Protocol in Kyoto, Japan, in 1997, with the goal of reducing global carbon emissions by 5.2 % by 2010 compared to 1990 levels, making greenhouse gas control or reduction a legal obligation of developed countries.

2013 IPCC's Assessment Report	The IPCC has published five official Climate Change Assessment Reports IPCC's Assessment Report (AR5) in 1990, 1995, 2001, 2007 and 2013 。The latest Climate Change Report (Climate Change 2021), the sixth edition of the Assessment Report (Sixth Assessment Report, AR6), was released on 7 August 2021. “Impacts, Adaptation and Vulnerability, Climate Change,” “Climate Change Mitigation and Synthesis Report Climate Change,” “Sixth Assessment Cycle Synthesis Report” are expected to be released in February, March and September 2022, respectively.
December 12, 2015 The Paris Agreement	In accordance with the provisions of the Bali Road Map adopted in 2007, COP 15, held in Copenhagen in 2009, resulted in a new Copenhagen Agreement. On December 12, 2015, 195 countries adopted the Paris Agreement at the 2015 United Nations climate summit to replace the Kyoto Protocol, hoping to work together to stem the spiraling tide of global warming.
2015 The 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development	The 2030 Agenda for Sustainable Development, adopted by all UN Member States in 2015, provides a common blueprint for peace and prosperity for people and the planet today and in the future. At its core are the 17 Sustainable Development Goals (SDGs), which are urgently needed actions in global partnerships for all countries, whether developed or developing. They recognize that eradicating poverty and other deprivation must be closely integrated with strategies to improve health and education, reduce inequality and stimulate economic growth, while addressing climate change and working to protect our oceans and forests.

COP26 climate conference in Glasgow

The 2021 meeting is the 26th of its kind, which is why it's called COP26. It was postponed from its original date of 2020 due to the global coronavirus pandemic. Representative of the Conference of the Parties at the last session of the Conference of the Parties. "Parties" are countries that have signed the UNFCCC, which was signed in Madrid in 2019. COP26 is important because it's the last decade in which the world must avoid the worst of global warming: unimaginable natural disasters, rising sea levels, and mass extinctions of wildlife. It is also a unique opportunity to build a stronger, fairer global economy. The longer a government waits for action, the harder it is to succeed. Representatives from governments around the world, as well as non-governmental organizations, businesses, faith-based groups, scientists and other groups such as indigenous peoples' delegations, attended. Media from all over the world also attended. The Conference of the Parties lasts for two weeks. This year's COP (usually starting with technical negotiations) has a slightly different structure, as there will be a two-day summit of world leaders from the start. Many countries still do not have access to the Covid vaccine, so organizers are still working on ways to make sure the meeting is safe for everyone to attend.

What should they decide on COP26? COP26 is the deadline for countries to propose emissions reduction plans. All in all, these plans need to put the world on track to stop global temperatures from rising by more than 1.5℃ by the end of the century. Although on the official agenda, these plans are unlikely to be realized. Rich countries have also pledged $100 billion a year to help poorer countries reduce emissions and protect themselves from climate change. The objectives of this meeting are focused on four main objectives:

- Strictly adhere to the Paris Agreement and keep global temperature rises within 1.5℃.
- Protect affected communities and natural habitats, work together to help climate-hit countries build defences, early warning systems and resilient infrastructure and agriculture, protect homes, livelihoods and lives.
- Help poor countries raise $100 billion to fight climate change.
- Governments, businesses and civil society are working together to accelerate the response to the climate crisis.

Many leaders and heads of state attended, such as U.S. President Joe Biden, French President Emmanuel Macron and British Prime Minister Johnson. Others, such as Sweden's Young Girl Berry, multinational companies from around the world and environmental groups, also attended, with more than 20,000 people participating. These important resolutions have now been adopted [3].

- Ending deforestation: The first resolution of the climate summit, signed by some 105 countries, will end deforestation by 2030. Canada, Brazil, Russia, China, Indonesia, Congo, the United States and other major forest countries have joined the agreement, and governments and businesses will join forces to invest $19.2 billion in forest conservation. In addition, 28 countries have made a declaration to curb deforestation in the production of commodities such as palm oil, soybeans and cocoa, and

more than 30 financiers have pledged not to invest in industries involved in deforestation.

- Phase out coal-fired power generation: Some 40 countries and more than 100 organizations, including Poland, Vietnam and Chile, agree that major economies should phase out coal-fired power generation by 2030 and developing countries should phase out coal-fired power generation by 2040. The United Kingdom, the host country of COP26, also stated that it hopes to make coal gradually enter history.
- Methane emissions reduction: More than 100 countries have joined the US-EU-led Global Methane Commitment, in which half of the world's top 30 methane emitters agree to cut methane emissions by 30% by 2030.
- Stop investing in overseas fossil fuel programs: The United Kingdom has led the initiative to end direct investment in all overseas non-emission-reducing fossil fuel programs by the end of next year, with the United States, Canada and other 20 countries joining the agreement, but China, Japan, South Korea and others have not yet joined the joint agreement.

International investors with global investment portfolios are increasingly calling for high quality, transparent, reliable and comparable reporting by companies on climate and other environmental, social and governance (ESG) matters. On November 3, 2021, at COP26, the IFRS Foundation Trustees announced the creation of a new standard-setting board—the International Sustainability Standards Board (ISSB)—to help meet this demand. The intention is for the ISSB to deliver a comprehensive global baseline of sustainability-related disclosure standards that provide investors and other capital market participants with information about companies' sustainability-related risks and opportunities to help them make informed decisions. The ISSB organized the Technical Readiness Working Group (TRWG), made up of representatives from the CDSB, TCFD, IASB, VRF and WEF, to make recommendations to the ISSB. The TRWG has completed work on two prototype documents: one focused on climate-related disclosures based on TCFD recommendations, including industry-specific disclosures, and the other provided for general sustainability disclosures [4] (Figure 7).

Figure 7: *Technical readiness working group (TRWG).*

What can we do in the Face of Climate Change?

On January 20, 2021, Taiwan Academia Sinica established the Air Quality Special Center and the Human Climate Change Project Center under the Center for Environmental Change Research to better respond to social concerns. At the launch ceremony of the Center, President Liao Junzhi stressed that the Academia Sinica should not only engage in cutting-edge scientific research, but also be science-based and fulfill its social responsibility on key issues. The two special centers set up this time will provide in-depth study of air pollution and climate change, with the objective of presenting scientific explanations and suggested countermeasures. "The Human Climate Change Project Center will continue the research findings of the Center for Environmental Change and participate in large-scale research at home and abroad, for example, in the International Coupling Model Comparison Program, which provides the scientific basis for the Sixth Climate Change Assessment Report (AR6) by IPCC," said humbly, a presidential-level research institute at the Academia Sinica. In addition, the Centre will participate in the Ministry of Science and Technology's Taiwan Climate Change Estimation Information and Adaptation Knowledge Platform (TCCIP) program to develop a more comprehensive study of climate change systems. In the future, research on severe weather simulation, industrial climate change risk assessment and seasonal forecasting will also be launched. The author can only do a good deal of knowledge curatorial platform responsibility, to provide the general public or enterprises on the impact of climate change concept and knowledge services. However, in areas familiar to the author, international standards published by the International Organization for Standardization (ISO) have made many contributions, as stated in the article ISO and Climate Change [5]:

- ISO environment-related standards help open world markets for clean energy and energy-efficient technologies and support climate change adaptation and mitigation.
- ISO standards help governments and organizations address climate change.
- ISO standards are seen as essential to the greenhouse gas (GHG) markets for cap-and-trade schemes, offsetting credits, carbon neutrality and low-carbon strategies and policies.
- ISO standards for climate change contribute directly to the United Nations Sustainable Development Goal 13 on climate action.

In 2020, Mr. Lu Robert (the next Chairman of CSQ, 2022~2024) introduced Dr. Chen Shu (Chairman of ZDALC) to me, from Dr. Chen Shu's using scientific leadership and management to shape the "Zhong Dao" culture, this kind of "Zhong Dao" way thinking that inspire me to say that if the quality development of Chinese society does not start from the integration of thinking, it is

difficult to have a good result, such as the integration of knowledge, value, thought, and wisdom. The Chinese Society that is about to enter the rich society, she will be a golden mountain and a silver mountain, for being rich and unkind, or green mountains and green waters, returning to nature, it depends on whether those who in the upper ranks can make good use of environmental capital; treat stakeholders well; be good at corporate governance while increasing economic benefits, in order to conform to the Chinese proverb: "A gentleman makes money and gets the right way."

A gentleman makes money and gets the right way

In fact, there are already many non-profit organizations (NPOs) in the world that have put a lot of effort into ESG issues, the most influential of course is the United Nations, followed by the Global Reporting Initiative (GRI), the Sustainable Accounting Standards Board (SASB), the Carbon Disclosure Project (CDP), the Task Force on Climate Financial Disclosures (TCFD) etc. By 2020, 58 stock exchanges worldwide have issued reporting guidance instruments that include GRI, SASB, IIRC, CDP, TCFD and CDSB. 24% of exchanges cite all six reporting instruments, 67% cite more than four reporting instruments, and only three exchanges (Shanghai, Shenzhen and Indonesia) have not cited any of them. Comparing the six tools, GRI is the most cited reporting tool, having been referenced by 95% of exchanges. The number of exchanges citing SASB and IIRC ranked second and third, at 78% and 76%, respectively. Since 2016, the high-profile TCFD, CDP and CDSB citation rates have also grown rapidly (Figure 8).

According to statistics, there are currently more than 600 ESG rating agencies in the world, including Bloomberg, MSCI, Vigeo-EIRIS, FTSE Russell, Rifle, CDP, etc., providing a variety of products and services for the market, from data, research, consulting, technology, to investment strategies and shareholder negotiation services. Their backgrounds are very different and their ratings are very divergent. In the face of this disagreement, how should we look at it? Should ESG ratings be reversed? In this regard, Professor Chiu Tzu-Kuan of Shanghai Advanced School of Finance of Shanghai Jiao Tong University was invited to write articles and share her views. The paper focuses on the reasons for the difference in ESG ratings, and summarizes scholars' research on the reasons for the differences into two schools, one is to explain the rating differences by technical factors, and the other is to explain the rating differences by social factors beyond the technical level. If the reasons for the rating divergence are beyond the surface, but are related to the social context of the rating agency, then it may be unrealistic to think about the return of the thousands of streams. Compared with "seeking common ground", it is feasible to "reserve differences" in ESG ratings, to understand the real reasons behind the differences in ratings, and to choose and use them wisely [6].

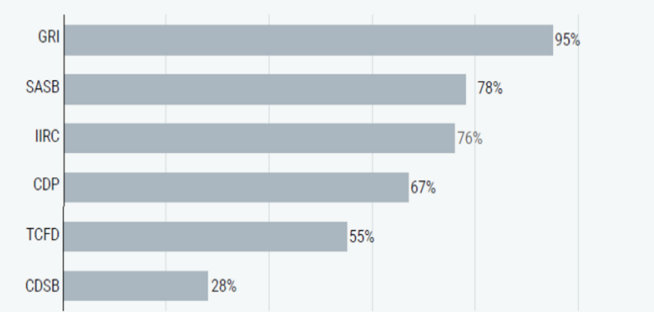

Figure 8: *2020 58 stock exchanges worldwide have issued reporting guidance instrument.*

ESG-Integrated Management System

The ISO 9000 series has undergone several revisions and promotions, and has now moved from the perspective of sustainable operation and management to the integration of overall development gradually. This sustainable development system architecture is based on the three major aspects of economy, ecology and society to form a Sustainable Development Architecture. It not only hopes to be compatible with the system, but also strikes a balance between professional and industry requirements. In the future, the integration of management systems of enterprises needs to be taken into account, which can be called the “ESG - Integrated Management Systems.” Its architecture. The new management system standards such as ISO 9001:2015 quality management system, ISO 14001:2015 environmental management system, ISO 27001 information security management system, ISO 22000:2018 food safety management system, etc. have all changed to adopt the “High Level Structure (HLS)”. HLS emphasizes and highlights the requirements based on “Risk thinking”, which means that risk-based thinking is indispensable to achieve an effective management system. ISO/IEC Directives, Part 1, Consolidated ISO supplement proposed HLS in its Annex SL in 2015, which is expected to be a framework for the integration of management system standards. The HLS of Annex SL (Figure 9).

Nobel Prize for Climate Change - Trinity

The IPCC won the Nobel Peace Prize in 2007, William D. Nordhaus in 2018 for integrating economics "integrated assessment models" with climate change, and the 2021 Nobel Prize in Physics was won by Japanese-American scientist Syukuro Manabe, German scientist Klaus Hasselmann and Italian scientist Giorgio Parisi. The first is that the IPCC prepares assessment reports based on member’s peer reviewing each

other's reports and published scientific literature by publishing special reports related to the implementation of the UNFCCC.

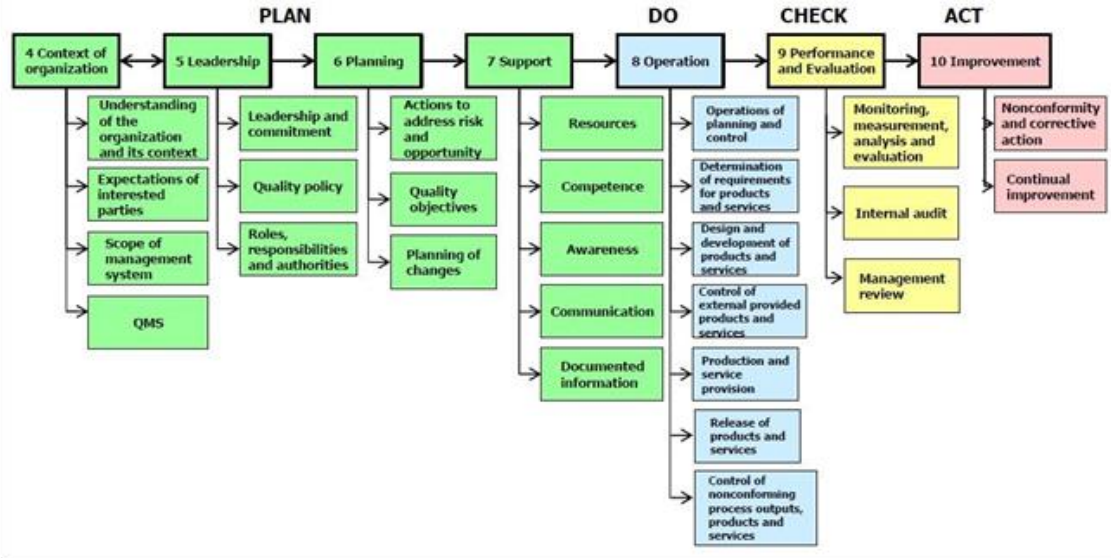

Figure 9: *Management system standard (High Level Structure).*

Second, the Syukuro Manabe and Klaus Hasselmann developed the atmospheric and ocean coupling model, so that the model further developed into a global accurate model, the study of the gradual increase in carbon dioxide on the climate. Third, Nordhaus's strategy for controlling carbon dioxide. Trinity, the IPCC has published five official Climate Change Assessment Reports (Assessment Report, AR) in 1990, 1995, 2001, 2007 and 2013, respectively, and a report on the physical basis of AR6 on August 7, 2021.

Carbon Economy: Mitigation and Adaptation of Climate Change

Since September 2020, the author has gradually explored the topics of ecological balance, social responsibility and corporate governance from the perspective of quality and professionalism, and with the ISO 9000 series, it has been from the perspective of organizational sustainable governance year by year to the integration of overall development. This sustainable development system architecture is based on the three aspects of economic, ecological and social aspects to form a sustainable development architecture, not only hope to be compatible with the system, but also to find a balance between professional and industry requirements. That is, an international capital market indicator ESG that measures the sustainability of enterprises, ESG represents the three major aspects of environment (E), society (S), and corporate governance (G). On environmental issues, the author has completed the following kinds of academic research articles: the relationship between human beings and nature, climate change - the topic that all mankind should face up to, the global carbon cycle, climate change - scientific evidence, climate change - quantify greenhouse gas emissions and climate change - carbon neutrality, etc., but in the face of the "Carbon Economy" this topic, economic outsiders want to discuss the reality is difficult to continue. After months of wandering around the knowledge website, I recently found 12 modules in the “Earth in the Future Change and Its Impacts Over next Century Program” at Penn. State University, the School of Earth and Mineral Sciences, of which Module 12, "Mitigation and Adaptation", is what this article envisions [7].

How the Circular Economy Tackles Climate Change

At present, most industries are adopting a "Take-Make-Waste" linear production model to face the growing market demand, the circular economy is designed to redefine economic growth, focusing on creating positive social benefits. The goal is to gradually separate economic activity from the consumption of limited resources and to reuse waste generated during the manufacturing process using recycling patterns. In the context of the interaction of economic, social and natural resource, circular economy is a continuous and positive development cycle, which uses and preserves natural resource through resource flow management, optimizes resource efficiency and minimizes potential risks while maintaining the life cycle of products and materials. Figure 10: Circular Economy System Illustration (Figure 10).

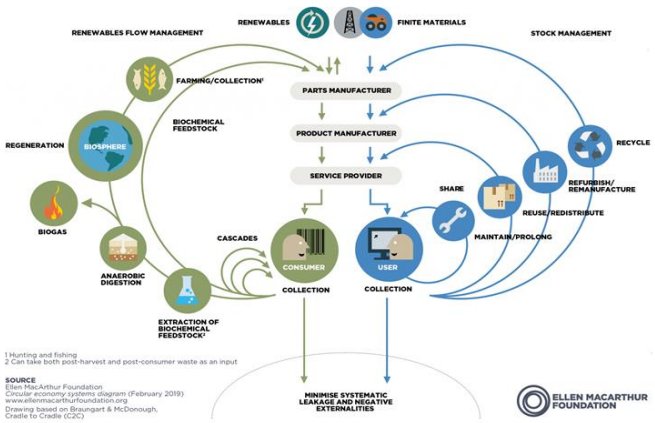

Figure 10: *Circular economy system illustration.*

The circular economy adheres to the three basic principles

As a global economic development model, circular economy separates economic growth from the consumption of limited resources, distinguishes between biological and non-biological materials, and maintains the highest value of resources and materials. Always maintain the highest efficiency and value for products, components and raw materials with a recoverable, recyclable design. A circular economy, large and small, should have a coherent cycle of development and a virtuous circle that can continue to strengthen itself. Specifically, the circular economy adheres to the following three basic principles:

- Avoid waste and pollution from the beginning of the design
- Extend the life cycle of products and materials
- Promote regeneration of natural systems

Conclusion

From knowing don't know what ESG is, to the superficial ESG knowledge that wrote the above chapters, from the superficial knowledge of ESG in these chapters, and then, falling into ignorance of the next 5 years, 10 years, 20 years.

Only know that there are in the world full of unknowns, unlock an unknown ring, and face another unknown ring, such a ring links the other ring, over and over. Looking back to see a string of untangled chains of knowledge, is a joy; looking ahead to the piles of disorganized chains of knowledge is even more challenging. Look at the knowledge map that we humans have accumulated, as shown in the upper left of Figure 11, what individuals do, and then we can understand what it means to see the sky and the sea with a narrow view. The next Board of CSQ (2022~2024) was officially inaugurated, and the new people and new atmosphere were introduced, so the author took the lead in proposing a new curatorial content, with the title of "ESG Knowledge Map Overview", handing over an ESG knowledge map that is better than a thousand words, and also handing over a volume of a thousand words that is also difficult to interpret the picture of ESG (Figure 11).

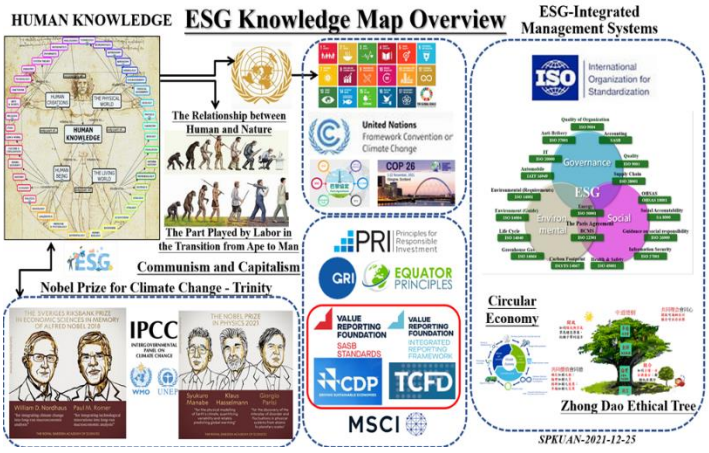

Figure 11: *ESG knowledge map overview.*

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