

Quality as an Environmental Mandate



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Quality Management
Division
Excellence Through Quality™

Shifting “Managing for Quality” Webinars to focus on Macro-Quality issues and concerns:

<u>Month</u>	<u>Title</u>
December 14 th	Quality as an Environmental Mandate
January 21 st	Quality as an Economic Imperative
February 11 th	Quality as a Social Responsibility
March 11 th	Quality as a Human Right
April 15 th	Quality as a Political Policy
May 6 th	Quality for our Manifest Destiny

How will “Managing for Quality” change?

How will quality change in the emerging future?

Developing a concept of Macro-Quality for Humanity!

Session 1 Quality as an Environmental Mandate

Session 2 Quality as an Economic Imperative

Session 3 Quality as a Social Responsibility

Session 4 Quality as a Human Right

Session 5 Quality as a Political Policy

Session 6 Quality for our Manifest Destiny

Extending the lessons we have learned from Micro-Quality work to work effectively at a global level for the benefit of humanity.

Abstract of Session #13:

This webinar discusses how environmental changes will mandate the attention of quality professionals as the Earth's climate is in the process of changing. We will review the definition of quality as proposed in this lecture series and examine how distinct categories of all environmental characteristics are being influenced to either their benefit or detriment. Additionally, the webinar will discuss the current state of the scientific evidence regarding the condition of these dimensions of environmental concern and offer some recommendations for how this understanding of alternative actions can be pursued by the global quality community as we pursue quality for the greater good of humanity and preservation of the planet, so we can cooperate in reversing the current critical state of these environmental crises.

What do we mean by a “Mandate”?

A command or authorization to act in a particular way on a public issue.



The transfer of power from one group to another which allocates their decision rights about a particular subject or area of authority.

A specified strategy to be executed or path of action to be followed that has been granted to permit performance of actions or duties that result in a specified desirable outcome.

A mandate bestows trust and responsibility on the recipient of that power or authority.

What do we mean by “Quality”?

“Quality is the relentless pursuit of goodness coupled tightly with the persistent avoidance of badness.”

Core Principles:

- **Respect people in their diversity of race, religion, and nationality.**
- **Respect scientific gains of those who have walked before us.**
- **Protect the environment which sustains all of us.**
- **Abstain from all intentional wrong-doing and harm.**
- **Practice two things in all activities ... either help or do no harm.**

What do we mean by “Environmental”?

The aggregate of surrounding things, conditions, or influences. Goodness is achieved by respecting and protecting the world around us (avoiding badness) and acting proactively to reverse the ill effects of past actions.

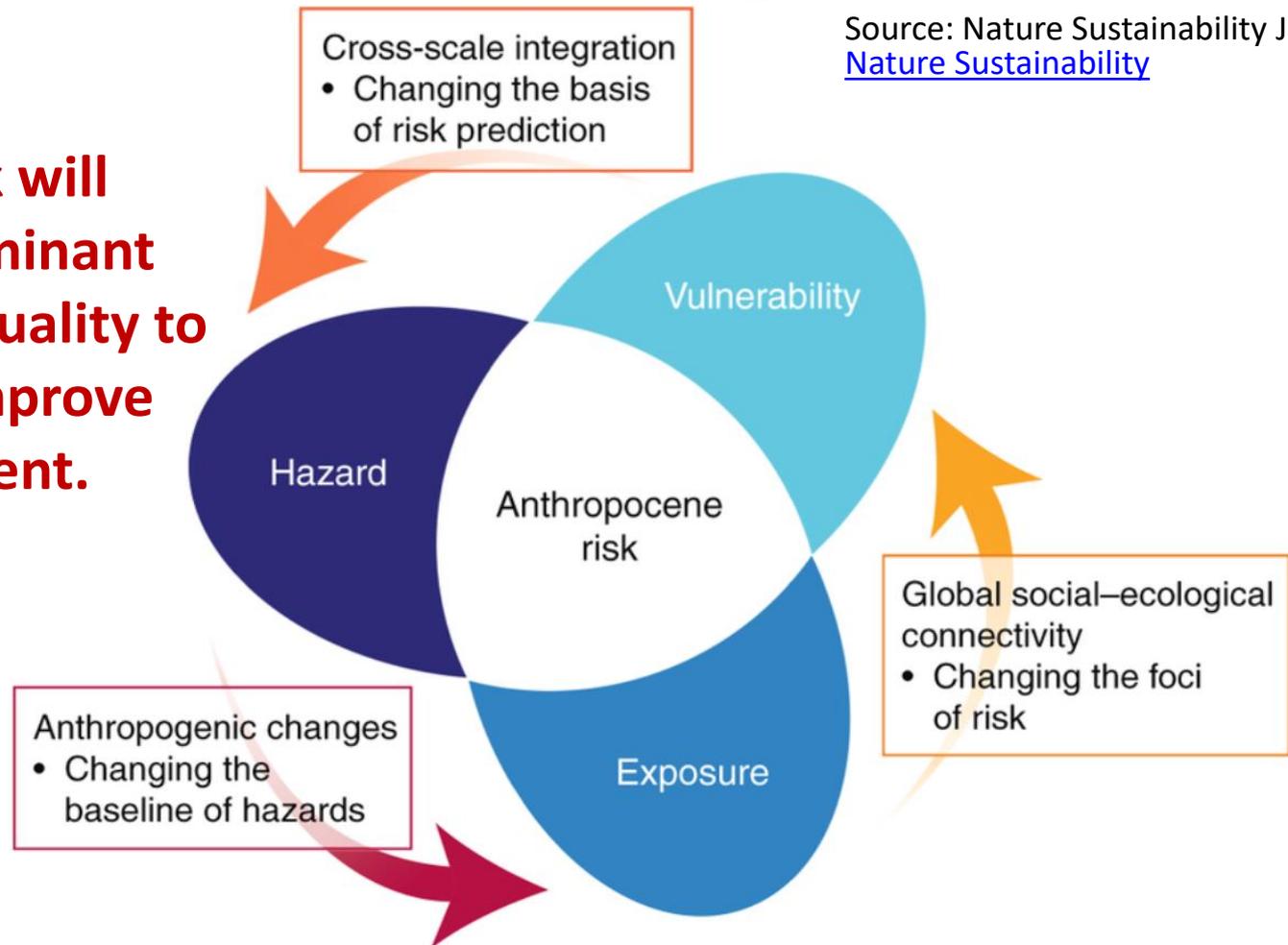
Global environmental risks are increasingly caused by our human activities which are becoming more complex and interconnected, which has a far-reaching consequence for people, economies and ecosystems.

Humanity has entered the **Anthropocene Age** – a geological epoch where humans are the dominant force of change on Earth. This Age is characterized by an increasingly interconnected and accelerating world.

Humans Must Learn to Manage the Risks!

Source: Nature Sustainability Journal
[Nature Sustainability](#)

Managing risk will become a dominant emphasis in quality to continually improve the environment.



Quantum physicist Richard Feynman said: “If we want to solve a problem that we have never solved before, we must leave the door to the unknown ajar.”

Learning Objectives for Session #13:

Objective 1: Understand the evolved concept of Macro-Quality.

There is an urgent need to broaden our concept of quality so that it is well able to address the global condition beyond the business applications.

Objective 2: Discover the current state of our environmental situation.

Investigate the wide variety of environmentally-related crises that are now influencing our way of life and reducing our quality of life.

Objective 3: Learn how quality can influence this situation affirmatively.

Changes in our discipline and its professional practice will be required to enable the world to benefit from the principles and practices of quality.

Objective 4: Recognize what it is that you can do to help improve!

The call to action needs to engage professionals in all disciplines so that a comprehensive global program can address the current state and create a future state that will benefit the generations to come – our grandchildren.

Quality as an Environmental Mandate

Part 1:

Discovering Macro vs. Micro Quality

Pursuing Quality to Benefit Humanity

“In management, the first concern of the company is the happiness of the people who are connected with it. If the people do not feel happy and cannot be made happy, then that company does not deserve to exist.”

~ Kaoru Ishikawa

Introduction to Quality Control

Thinking Differently About Quality:

Distinguishing between “Macro-Quality” and “Micro-Quality” domains.

Microeconomics is sometimes called the “theory of the firm” as it has a focus on the way that organizations operate. It is frequently reduced to Price Theory.

Traditionally, the key emphasis of quality has been on creating stability in production operations, eliminating waste, and reducing defects – all of which concentrates on the cost reduction component of pricing theory.

Macroeconomics refers to large scale systems – economic operations of an industry, specific society or nation, or global interrelations between them.

Macro-Quality elevates the concentration of quality to socio-technical systems that influence quality-of-life for humanity and of those factors that affect this condition. A shift from Micro-Quality will greatly increase the breadth and depth of quality activities.

Quality Assurance, Control & Improvement:

Foundation to engage environmental improvement by quality methods.

Joseph M. Juran perceived of quality as a parallel model to the financial acts of financial control, financial improvement, and financial planning.

If one adds the audit function to Juran's Trilogy (e.g., quality assurance and the "second set of eyes" accountants use for transactions but is the activity of quality inspection), then this analogy between finance can be considered complete.

The "job" of quality inspection, assurance, and auditing is to "check" in a way that assures that mistakes and problems do not influence outcomes.

The "job" of quality control is to maintain a stable system of processes in which the outcome is produced constantly with minimal variation (e.g., no shortfalls or over-achievements that are not planned).

The "job" of quality improvement and planning is to maximize the use of all resources (including human) while minimizing financial losses.

Promoting Quality as a Macro-Application:

Quality must be advanced from the level of a firm to benefit all of society.

The shift to Macro-Quality also shifts the concern from one that is purely financial to one that engages humanity and seeks to improve quality of life for all – health, happiness, and prosperity of all people while, at the same time, assuring the long-term sustainability of our planet.

Cain famously asked God: “Am I my brother's keeper?” [Genesis 4:9]. To which the reply was: “Bear ye one another’s burdens.” [Galatians 6:2]. The same principle is echoed in all of the world’s religions.

Stewardship is the “job” of supervising or taking care of resources that do not belong to that person. It is an obligation of a steward to carefully and responsibly manage the resources that have been entrusted to them by the owner of those resources.

The owner’s mandate is the moral proposition: do no harm, prevent any loss, and increase the value of benefits that may be obtained.

Applying “lean” and “clean” methods to Earth:

“Badness” to avoidance of waste and loss to future generations that is caused by humanity’s lack of quality stewardship for Earth’s resources.

Japanese Shinto gods hate filth. Buddhism teaches the importance of cleanliness for having a peaceful mind. In Lean improvement, cleanliness is foundational in daily work discipline – **seisou** (清掃): cleaning as the daily discipline of sweeping, collecting/disposing of trash, and wiping/cleaning surfaces (a 10-minute job). In Japan other terms also describe routine cleaning:

- **Katazuke** (片付け): making things tidy – common sense organizing/cleaning.
- **Souji** (掃除): Buddhist daily cleaning of the temple washing the floor with a wet cloth using a disciplined method (**kata** (型)).

Seisou also initiates **Total Productive Maintenance (TPM)**: maintenance cleaning locates abnormalities in work processes that are uncovered by deep cleaning and inspection – part of autonomous maintenance (**jishu hozen** (自主保全)).

- **O-Souji** (大掃除): annual deep cleaning; creates a fresh spirit and fresh start.
- **Susuharai** (煤払い): dusting in which surface dirt and dust are removed while giving thanks for blessings of the prior year and purifying for the year ahead.

Quality as an Environmental Mandate

Part 2:

Dissecting the Environment into the Categories of Goodness and Badness

Pursuing Goodness – Avoiding Badness: Necessity of Environmental Stewardship

“Every new source from which man has increased his power on Earth has been used to diminish the prospects of his successors. All his progress has been made at the expense of damage to his environment which he cannot repair and could not foresee.”

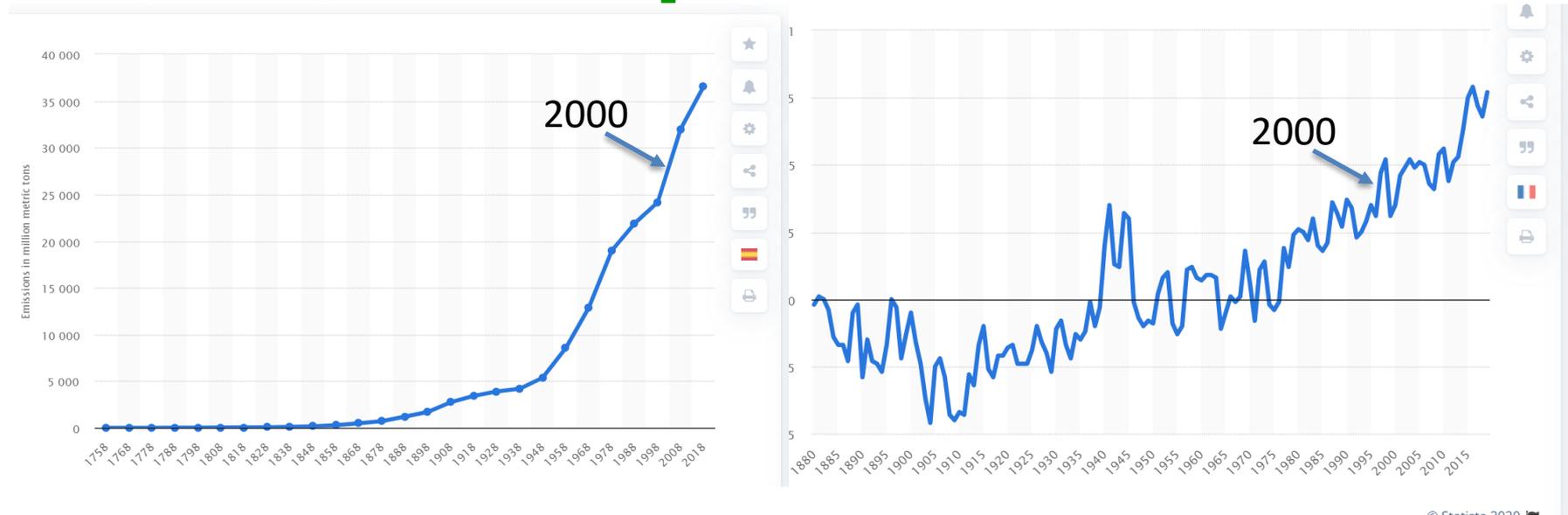
~ Cyril D. Darlington

The Evolution of Man and Society

Stabilize the Climate – Reclaim Pollution:

“I always saw pollution as theft, and I always thought, ‘Why should somebody be able to pollute the air, which belongs to all of us, or destroy a river or a waterway, which is supposed to belong to the whole community?’”
~ Robert Kennedy, Jr.

History of the global rise in CO₂ and Ocean Temperature:



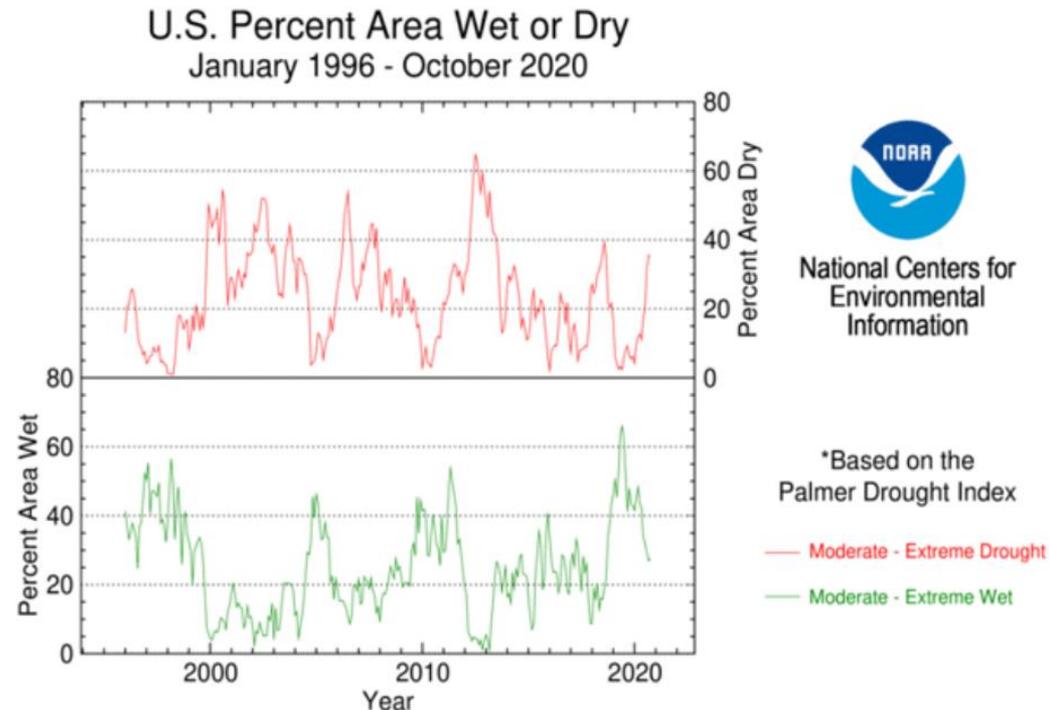
Mandate: Stabilize the climate through activity that concentrates on air and ocean pollutants and reverse the trend of anthropocentric global warming.

Provide Clean Water – Distribute it Equitably:

“Because no matter who we are or where we come from, we’re all entitled to the basic human rights of clean air to breathe, clean water to drink, and healthy land to call home.” ~ Martin Luther King III

Water problems exist:

- Droughts
- Floods
- Micro-plastic pollution
- North Pacific Garbage Patch
- Lack of potable H₂O
- Access to clean water
- Industrial waste
- Carcinogenic chemicals



Deliver Ubiquitous Energy – Affordable Power:

“Electricity can transform people’s lives, not just economically but also socially.”
~ Piyush Goyal

Ubiquitous energy means that there is an access to energy anywhere and any time – efficient energy that is affordable and available that also is distributed to everyone.

Capturing energy from a wide variety of alternative sources and enabling access to the global electrical grid:

- Advanced Solar and Wind Technologies
- Hydrogen Electrolysis
- Geothermal
- Ocean Wave Generation
- Hydroelectric
- Biomass
- Nuclear



Mandate: Reliable, affordable energy must be delivered to all communities across the world so they may have an opportunity to improve in all dimensions.

Improve Healthcare – Promote Wellness:

“Health is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.”

~ World Health Organization

The World Health Organization’s most pressing healthcare issues:

- Health issues that result from climate change.
- Providing healthcare to nations in crisis
- Making healthcare accessible to everyone
- Expanding access to vaccines and medicine
- Fighting communicable diseases
- Preparing for epidemics
- Making healthy food more accessible
- Preventing antibiotic resistance
- Ensuring healthcare facilities are clean and sterile



Mandate: As population grows and ages, ability to access quality healthcare and receive drugs and appropriate medical treatments must be accelerated.

Produce Safe Food – Secure Availability:

“So long as you have food in your mouth, you have solved all questions for the time being.”
~ Franz Kafka

UN #2 Sustainable Development Goal: End hunger, achieve food security, and develop sustainable agriculture.

- Halt land degradation and topsoil erosion.
- Restore degraded farmland.
- Boost the yield of current agricultural land.
- Broaden the use of organic fertilizers.
- Improve irrigation and storage facilities.
- Develop drought-resistant crops.
- Apply pest management technologies.
- Increase availability of genetic feed stock.
- Educate SME farmers in modern agricultural practice.



Drive Accessible Technology – Global Literacy:

“Withholding information is the essence of tyranny. Control of the flow of information is the tool of the dictatorship.” ~ Bruce Coville

Enabling broadscale diffusion of the information infrastructure enables the development of global literacy which creates the capacity for having a democratic society where people can function in a shared community.

This requires:

- Quality education at all levels of teaching
- Access to Internet (WWW)
- Availability of computers
- Broadband connectivity
- Personalized learning environment
- Open flow of information
- Employment-related education



Mandate: Internet broadband access to all with improved quality of public education to equip people for the coming job markets.

Create Mutual Prosperity – Eliminate Poverty:

“Poverty has created a new planet within this planet. A Planet of Misery that all humanity should be ashamed of!” ~ Mehmet Murat Ildan

Frederick W. Taylor proclaimed the purpose of scientific management to be the development of “mutual prosperity” for workers and companies!

- End extreme poverty everywhere (10% of the world lives on less than \$1.25 USD per day – most live in the sub-Saharan Africa nations).
- Create jobs that pay a decent wage.
- Provide social protection for children living in poverty conditions (in 2016, 4 Billion people had no form of social protection).
- Accelerate support for developing policies and programs of economic development for the least developed and developing nations.
- Encourage development of entrepreneurship among youth in these least developed and developing nations.
- Encourage access to global trade markets through quality programs.

Consume Responsibly – Without Inequality:

“Multinational corporations do control. They control the politicians. They control the media. They control the pattern of consumption, entertainment, thinking. They’re destroying the planet and laying the foundation for violent outbursts and racial division.” ~ Jerry Brown

Ensure sustainable production and consumption patterns:

- Restrict consumption of natural resources
- Reduce food waste at retail and consumer levels
- Reduce production of waste in all dimensions
- Environmental management of chemical life cycles
- Reduce subsidies on non-sustainable fossil fuels
- Eliminate over-production of durable goods
- Remove market distortions that encourage consumption
- Develop sustainable tourism as an industry
- Promote sustainable procurement practices



Uphold Peaceful Coexistence – Social Justice:

“True peace is not the absence of tension; it is the presence of justice.”
~ Martin Luther King, Jr.

Areas of development needed include:

- Negotiating and Resolving Conflicts
- Mediating and Arbitrating Disputes
- Promoting Peaceful Coexistence
- Establishing National Reconciliation
- Improving the Quality of Governance
- Building Social Cohesion
- Expanding Women’s Empowerment
- Strengthening Non-state Actors
- Engaging Non-Governmental Organizations
- Developing a Condition of Normalcy



United Nations Sustainable Development Goals:

The UN SDG's define transcendental quality for all of humanity!



Quality as an Environmental Mandate

Part 3:

Quality Activism in Pursuing Environmental Security

Pursue What is Relevant for Humanity!

“In the Amazon, you may walk for days without seeing a tree; in Beijing, the air is the color of a bruise. Three thousand miles of litter floats in the Atlantic Ocean, plastic bags and old nappies, bumping against the side of the ships... I sat before a committee in Brussels and they said, ‘What do you want us to do about it? If we change now, we’ll destroy our own economies,’ and I said, ‘You have destroyed your own world’.”

**~ Claire North
*The End of the Day***

Extending Short-termism to the Longer-term:

It is time to eliminate the “buy-now, pay-later” logic that is promoted by both politicians and corporations.

Politicians are known for their ability to “kick-the-can-down-the-road” by making in near-term investments and paying for them in the future.

Business leaders often do similar things to create a better-looking P&L or balance sheet – discounting pricing at year-end to advance sales from the next year so that their EBIT looks more attractive to investors. They are “buying revenue” to benefit their bonuses!

These behaviors are driven because performance is only judged over the short-term (politicians want to be reelected at next opportunity and the boss needs to delivery quarterly financial results).

Neither of these behaviors generate benefits for society – the results are self-serving and not altruistic – for the benefit of humanity.

Seek Austerity – Avoid Consumerism:

Conspicuous Consumption: Consumerism to demonstrate status or style.

Consumerism is economic consumption that acquires goods and services in ever-increasing amounts for the sake of demonstrating an increase in status of the purchaser. This conduct drives businesses to overproduce to satisfy growing demand; however, demand shifts with respect to style changes and manufacturers revert to building in planned obsolescence and use advertising to manipulate consumer spending.

Austerity reduces spending and does not overinvest in goods or services that are not necessary for their intended purpose. Austerity is practiced in two ways:

- (1) Strict control against over-spending by not investing in frills or things that are not essential; and**
- (2) Investing in efficiency-producing by assuring that investments have a required possess capability to perform the required actions.**

Developing a “Global Seisou” Mindset:

Ask difficult questions; seek equitable solutions; act to benefit humanity.

In times of war nations operate much more productively. In peacetime, nations seek their own benefit above that of their neighboring states.

A “global seisou” mindset is concerned about distribution of the global resources as required to meet local needs. It attempts to distribute in an equitable manner the resources necessary for the good of humanity so that health, peace, and prosperity can be enjoyed by all people on Earth.

Resources like nutritious food, clean water, healthcare, and education are essentials of life for all communities, everywhere on Earth.

Hoarding of resources by nations or individuals is to be discouraged as a new way of thinking embraces all nations under the common umbrella of humanity and we work together to collaborate in redesigning a global system that distributes what is needed to those that need it most.

Humanity's Rule #1: Clean up Your Own Mess!

How to start this global quality transformation – start local, build global.

Those who are responsible for the “mess” that we see in our world must be held accountable for “cleaning up the mess” and designing new ways of working that prohibit waste, loss, and inefficiency in the future.

In Rwanda, each local community (approximately 300 families) takes one weekend a month to fulfill their “social obligation for community service by doing projects that advance the quality of life within their village. Is it possible to extend this best practice everywhere?

In India small businesses combine their resources to obtain benefits that none of them could obtain on their own. Over 75% of the world is made up of small businesses – how can we leverage their capabilities?

In Finland companies share best practices and work with universities to develop competence in current and future generations. A best practice?

Extend Your Reach to Global Seisou!

Developing a global culture that creates a mindset of ownership for the resources of Earth; responsibility for its frugal consumption; and a strong commitment to constancy of purpose in applying this quality attitude to everything, everywhere, for everybody.

“Seisou” is not the first step in daily management, so Macro-Quality will require prerequisite steps of “seiri-seiton” to make “seisou” operate in the right way:

Seiri (整理) for Macro-Quality: Build environmental awareness by a deep study to make sense out of all dimensions of that generate waste, loss, or create inefficiencies which impact life on this planet.

Seiton (整頓) for Macro-Quality: Order the chaos by removing historical barriers and correcting past errors to rectify environmental issues **ASAP and plan to rapidly and equitably stabilize consumption!**

Develop a “global culture” of “quality of life for the sake of humanity!”

Take-away Lessons Learned

“Those who cannot remember the past are condemned to repeat it .”

~ George Santayana

Critical take-away observations:

How will you prepare yourself and your organization for these dimensions of change that will confront humanity in the future?

Summary statement

In this “**Anthropocene Age**” only humanity can act positively to reverse the direction of environmental changes and prohibit its continued degradation in the future.

This webinar addressed the following learning objectives to help you discover the challenges your career will face in the future:

- **Understand the evolved concept of Macro-Quality.**
- **Discover the current state of our environmental situation.**
- **Learn how quality can influence this situation affirmatively.**
- **Recognize what it is that you can do to help improve.**



Quality Management Division

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Thank you

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Future QMD Webinars:

[Managing for Quality ASQ QMD Webinar Series by Dr Gregory H. Watson:](#)

- No. 14: “Quality as an Economic Imperative” January 21, 2021; 1500 ET
- No. 15: “Quality as a Social Imperative” February 11, 2021; 1500 ET
- No. 16: “Quality as a Human Right” March 11, 2021; 1500 ET
- No. 17: “Quality as a Political Policy” April 15, 2021; 1500 ET
- No. 18: “Quality as our Manifest Destiny” May 6, 2021; 1500 ET

[ASQ QMD Webinars:](#)

- “Management 2.0 for Practitioners and Managers” January 28, 2021; 1800 ET by Forrest W. Breyfogle III

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