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Dear Fellow HSSE professionals

We express our sincere gratitude to all team members and their extended support in shaping & bringing this third “The Bulletin”.

In this Bulletin, sharing below contents & topics and please notify us if there is any amendments in standards & Regulations, will publish in upcoming bulletins.

1. ASSP Student Membership Campaign presentation tips
2. Disaster Preparedness—How to Reduce the Emotional Impacts of Loss
3. Occupational Safety and Health Laws in Pakistan – Part 2.
4. ISO 45001 sees the light of the Day
5. Changing risk context for organisations
6. Exceeding Earth’s
7. Worker safety handbook slides
8. Complimentary download links on “Managing Safety (IOSH), Tool Box talk (Eye safety), Safety Hand book (Saudi Aramco) and Paint safety (CB&I slides)

Thank you

Sincerely

ASSP Region IX HSSE Standards & Regulatory Chair

Working together for a safer, stronger future

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## Student membership campaign presentation tips

**Being a student member of ASSP means more than just coming together with fellow safety students.**

Your development as a safety professional is not the result of a single course or a memorable professor. It's the result of a whole series of decisions you make about your future career. At ASSP, we provide you with opportunities to build your network, expand your education, grow your career, learn from industry experts and earn scholarships.

### **A contribution from Maddhu NC, ASSP Region IX, HSSE Standards & Regulatory Chair Past ASSP Region IX Student Engagement Chair**

In recent days some of ROC members asking me to share presentations on Student Membership and Student Section promotion / awareness campaigns. Here sharing some of key input / points and tours can be tailor made presentations.

Countries like India, the buzz word in education system is "FILLING THE GAPS BETWEEN ACCADEMIA AND INDUSTRY" "LACK OF SKILLS" "ACADEMIA IS NOT PREPARING STUDENTS UPTO THE LEVEL OF INDUSTRY EXPETATIONS" and so on. May the filling Skill gap is in demand in every country. As an experienced professional and having interest in helping students, you can consider these buzz words as guidelines.

Another important aspect is, almost all regulatory or third-party accredited institutions /colleges / universities may already some student societies / chapter, which existing for name sake or in a long hibernation mode. When you propose to establish ASSP student section, they should not feel "chapter like another chapter", sometimes this kind of attitude of an institution become a bottleneck.

To prevent such situations, we must do the basic home work on various aspects;

- Do some survey on "present employment opportunities" in your region/country
- Statistics on number of Engineering and Non - Engineering graduates in a given academic year (every year)
- What is the conventional/preferable stream for getting better employment

- What are the core industries in your region / country (if you take our region, core industries are Information Technology, Pharma and few manufacturing industries)?
- Current recruitment trends. Try to get the basic information with any HR professionals or groups
- Little information on Recruitment policy
- Industrial rules on OSH / EHS recruitments
- Curriculum oriented / base skill sets and trainings (most essential)
- Check the student credentials in LinkedIn

If you have information on these lines, if you notice, knowingly or unknowingly, you are learning four major skills which you can emphasize during interactions with students. Those skills are "Observation, Research, Outreach, and Business Acumen". Make sure and assure that membership in ASSP is a stepping stone to career enhancement and advancement in the high plateau.

Some of skills are inherent and you can emphasize in your interaction and presentation. Like: Participation in section activities, students will have OPERATIONS opportunities, LEADERSHIP roles and opportunities, PERSONAL growth and development. Those opportunities are not easily available elsewhere. Some additional learning benefits are TRAINING, TEAM WORK, NEGOTIATION SKILLS, DECISION



MAKING, BUDGETING, EVENT MANAGEMENT AND QUALITY as well opportunity to build credentials.

Once section identified with the permission of management, section leaders can approach industries on their own. This is another way of helping management in "FILLING THE GAPS BETWEEN ACADEMIA AND INDUSTRY" also increase rapport with industry, so that students will have more confidence and courageously face the interviews.

Also suggest you raise a question and give explanations on Certificate Vs Certification.

Another suggestion is trying to engage students with audio and visuals. Include some videos of industrial incidents ask them to guess the reasons and let them suggest how they act if they present at the incident and what they suggest preventing it. For demonstration purpose, prepare an incident report and CAPA template.

## Few useful screen shots



As society becomes more complex, there is a constant need for new and advanced goods and services. This, in turn, creates jobs and professions that were unheard of just one generation ago. Because of the very rapid changes in these jobs and professions, it is hard for students to learn about future job opportunities.

It is even more difficult to know about the type of preparation that is needed for a particular profession—or the qualities and traits that might help individuals succeed in it.

## Credibility

Testimonials, endorsements and word-of-mouth, are effective ways to increase credibility.



## Guide lines for Hiring Professional

Determine whether the candidate regularly completes OSH-related continuing education courses/ seminars to stay current on emerging issues and new developments. Look for courses/seminars that qualify for continuing education credits from accredited certification organizations.

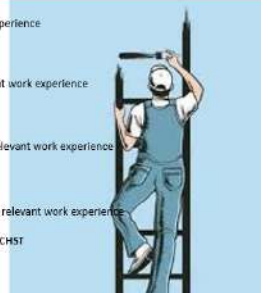
## Pathways in HSE profession

**Executive VP / SVP / EVP** : 10+ years of relevant work experience  
Supportive Certifications : CSP, CIH, CFPS Or CHMM

**Director / Senior Management** : 8 TO 10 years of relevant work experience  
Supportive Certifications : CSP, CIH, CFPS Or CHMM

**Safety Manager / Technical Specialist** : 5 TO 7 years of relevant work experience  
Supportive Certifications : CSP, CIH, CFPS Or CHMM

**Safety Practitioner / Technician Technologist** : 3 years of relevant work experience  
Supportive certifications : GSP Or ASP Or OHST, CLCS Or CHST



## Pathways in HSE profession

Certified Safety Professional® (CSP®)  
Associate Safety Professional® (ASP®)  
Graduate Safety Practitioner® (GSP®)  
Safety Management Specialist (SMS)  
Occupational Health and Safety Technologist® (OHST®)  
Construction Health and Safety Technician® (CHST®)  
Safety Trained Supervisor® (STS®)  
Safety Trained Supervisor Construction® (STSC®)  
Certified Environmental, Safety and Health Trainer® (CET®)







## Disaster Preparedness—How to Reduce the Emotional Impacts of Loss.

- By Dr. Deborah Bier, PhD and Antone P. Braga

Much of disaster psychology focuses on the response and recovery phases of emergencies. Given it really is true that an ounce of prevention is worth a pound of cure, we think that addressing emotional issues alongside the physical facets of preparedness is a worthwhile area in which to focus. Probably the most difficult aspect following a disaster is in having to enter the realm of the unknown. Psychologically, most people are not up to the task under circumstances that follow emergencies. It is very common to see people in a state of shock, confusion and helplessness. Those who are objective, informed and prepared, are more inclined to be more emotionally level and competent. Below are some of our recommendations.

Reduce the risk of emotional loss through these 9 simple steps:

1) **ANTICIPATION.** Think about the natural range of feelings people likely experience when they think about the possibility of an emergency, which range from, "I'll be overwhelmed...I won't know what to do...I'll freeze/panic...I won't be able to cope..."; to the other end of the spectrum, "I'm well prepared...I'm competent...I'll get through this...I'm in control."

Anticipate that helpless feelings and reactions to disaster can be managed.

2) **REDUCE ANXIETY.** Discuss GOOD approaches to reducing anxiety (e.g., keep informed from credible sources, get busy preparing, and talk with others for support). Emphasize reducing anxious anticipation and inability to cope through good preparedness. Talking about preparedness for potential emergencies will decrease anxiety or panic. Remember: research supports that solid information is the antidote to panic. Know that well-grounded information decreases anxiety.

3) **WHEN TO WORRY.** Discuss ABNORMAL responses to anticipatory emergencies (e.g., persistent disturbance in sleeping, eating, working, presence of suicidality, episodes of violence, increased drug/alcohol dependence to manage feelings, growing depression, panic



Live or on demand recorded webinar





attacks, or inability to carry out normal tasks of daily living). Who is most at risk for these? Not most people. Talk about different types of professional help available in the community you can turn to if you find you are having such reactions.

4) **PRACTICE STRESS REDUCTION.** Talk about the need to adopt and regularly practice stress-reducing measures now (e.g., being in nature, meditation, exercise, prayer, relaxation protocols, eating well, sleeping enough, and social interaction). To first attempt self-calming techniques only after a disaster is a recipe for failure. Since stress-reducing methods take time to become a matter of habit, they must be learned and practiced in advance.

5) **GET THE FAMILY INTO ACTION.** Get children and other family members psychologically and otherwise prepared for emergencies.

Discuss a plan of action, and have a disaster supplies kit: water, food, first aid supplies, clothing and bedding, tools and emergency supplies, and special items for medical conditions. Keep the information age-appropriate for children, and talk about what adults and children can do to be prepared. Be calm and informative, focus on active measures everyone can take together right now.

6) **WHAT RECOVERY IS LIKE.** Talk about what happens emotionally to MOST people following a disaster (they recover with time, or experience little or no lasting emotional damage). This information can be reassuring both before and after a disaster, creating (hopefully, self-fulfilling) expectations for a positive emotional outcome (e.g., "I know over time, things will get better...most people come through and recover; I know I will, too.").

7) **A JOB WELL DONE!** Take pride in the accomplishment of being prepared. Preparedness IS peace of mind and brings with it comfort in knowing you are well prepared to cope. Remember that increased readiness is a powerful tool to promote self-reliance in a

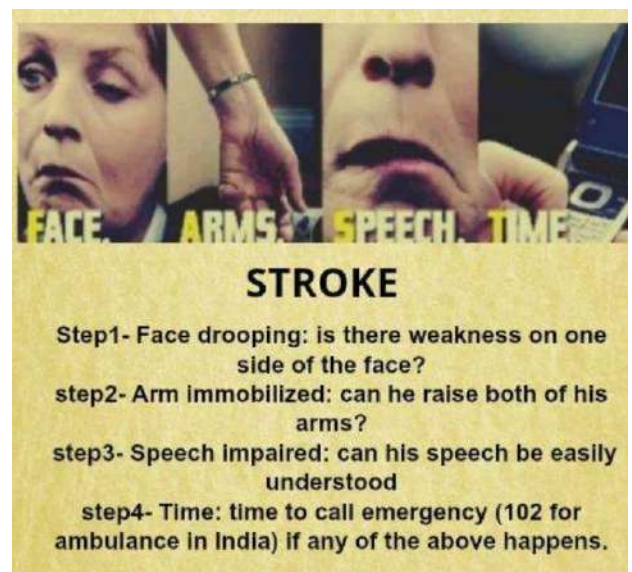
household, neighborhood, or community and contributes to an internal sense of mastery and confidence.

8) **PROTECT THE FAMILY'S ASSETS TO REDUCE STRESS.** The prospect of losing one's home and possessions is highly anxiety-provoking. Become accustomed to the concept that a property insurance claim is a business recovery issue, considering the family's assets and losses to be the "corporation" that will need recovery. Adjusters on the other side of the table know they will be negotiating a business transaction, and so should you. Having this awareness beforehand can help protect your interest, and improve your negotiating ability.

9) **MAINTAINING CONTROL.** Psychologically, disasters are an experience of losing control. Control over just about everything...and to such a high extent to be intolerable for many people. Keep at-the-ready NOW, how to calculate, prepare and settle property insurance claims. Much the same as one keeps a dictionary for reference, have a book containing fundamental information you need, like rules that govern companies' behavior, claim values, your rights and responsibilities, and adjusters' jargon. Have a basic understanding how to determine what you are entitled to under your property insurance policies:

Source:

[http://www.cityofsancarlos.org/emergency/disaster\\_preparedness\\_how\\_to\\_reduce\\_the\\_emotional\\_impacts\\_of\\_loss.asp](http://www.cityofsancarlos.org/emergency/disaster_preparedness_how_to_reduce_the_emotional_impacts_of_loss.asp)







## Occupational Safety and Health Laws in Pakistan – Part2

Contributor Mr Mr Syed Amjad Ali, ASSP Pakistan President

6	Ministry of Defence, Rawalpindi	<p><b>a. <u>Military Lands &amp; Cantonments Department</u></b></p> <ul style="list-style-type: none"> <li>i. Pakistan Occupational Health and Safety Act 2018 is agreed to and much appreciated.</li> <li>ii. Protection of workers against sickness, diseases and injuries related to working environment is considered to be the <i>sole responsibility of the employer/department</i>. Occupational Health &amp; Safety (OHS) has been recognized not only as a basic human right but also an integral part of workers centered agenda for social and economic development of any country.</li> <li>iii. The commitment to workers health and safety is recognized an obligation of the International Labor Organization (ILO) in achieving the adequate protection for health of workers in all occupations. It is a key element in achieving sustained decent working conditions and strong preventive safety culture.</li> <li>iv. <i>The risks and stresses for occupational accidents and diseases at workplace have to be managed jointly by the employers and workers and needs establishment of OHS management system.</i></li> <li>v. The Government should create necessary environment, provide a legislative framework and strengthen enforcement mechanisms. <i>The most essential steps are; capacity building of enforcement mechanisms through provision of necessary training, equipment, recruitment of qualified personnel and having an OHS tool kit to facilitate proper inspections and awareness raising campaigns.</i></li> </ul> <p><b>b. <u>Joint Staff Headquarters</u></b></p> <ul style="list-style-type: none"> <li>i. The proposed Pakistan Occupational Health and Safety Act 2018 amply covers the multifarious issues of workers against sickness, diseases and injury related to the working environment as embodied in the preamble of ILO (International Labor Organization) Constitution.</li> <li>ii. The establishment of Pakistan National OHS council and Directorate is also a welcome step which would overview, coordinate and supervise enforcement of proposed Act.</li> </ul> <p><b>c. <u>Staff Duties Directorate</u></b></p> <p>Keeping in view the mandate, scope and function of Pakistan National Occupational Health and Safety (OHS) Council, It is suggested that Engineer in Chief and Surgeon General of Pakistan Army may be included as permanent members of the Council as representative of Professional Organizations and Medical Professional respectively in accordance with para 4 sub para (1) sec VI and VII of OHS Act 2018. Their inclusion as members will not only facilitate formulation of policies/ legislation but will also be helpful in planning and imparting realistic OHS training/ education.</p>	<p><b>Comments are positive as a whole with following suggestions:</b></p> <p>Military Lands &amp; Cantonments Department</p> <p>v. Agreed, all suggestions will trigger once Act is approved. The Sindh OSH Policy provides a good example of all-rounded &amp; comprehensive initiatives in making laws, improving implementation machinery, judicial &amp; social security systems, capacity building and improving commitment &amp; awareness of employers and employees. Similar policy may be framed at Federal level.</p> <p><b>Staff Duties Directorate</b></p> <p><b>Staff Duties Directorate</b></p> <p>Refer to Section -4 (vi) Representatives of Professional Organizations will be part of OHS Council</p>
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7	Ministry of Defense Production, Rawalpindi	Not Provided.	
8	Power Division, Islamabad	Not Provided.	
9	Petroleum & Natural Resources Division, Islamabad	Not Provided.	
10	Ministry of Housing and Works, Islamabad	Not Provided.	
11	Pakistan Engineering Council (PEC), Islamabad	<p><b>A. Objectives</b></p> <ol style="list-style-type: none"> <li>Will this act be only applicable to organizations, institutions and geographic areas under federal government?</li> <li><b>Objective 1</b> mentions “welfare”. How would this be defined? there is no definition provided in the document.</li> <li><b>Objective 2</b> is unclear. Is it describing dispute / conflict resolution w.r.t. OHS?</li> <li><b>Objective 5</b> “Securing compliance through appropriate compliance?” only enforcement or implementation would have been fine.</li> <li><b>Objective 6 &amp; 7</b> could be combined. “Providing a framework for continuous improvement in OHS standards by ensuring scrutiny and review of actions taken by person -in-charge for enforcing OHS”</li> <li>When each of the province, specifically after 18<sup>th</sup> amendment is responsible to regulate OHS issues, how will the harmonization will be possible? For instance; Sindh has already implemented OHS Act, in case of National Act which one will be applicable?</li> <li><b>Objective 1 and 8</b> are in conflict w.r.t practice-lego perspective.</li> </ol> <p><b>B. Definitions</b></p> <ol style="list-style-type: none"> <li><b>Accident</b> – suggested to include “at Work” in the definition?</li> <li><b>Mental Injury</b> – How would it be evaluated?</li> <li><b>Point (xii)</b> – Does any other person include third party?</li> <li><b>Point (xii)</b> – Fall of material, accident related to heavy construction equipment, (h) structure or also supporting structure?</li> <li><b>Point (xvi)</b> – What about process design?</li> <li><b>Definition</b> of Construction site?</li> <li><b>Point (xxv)</b> – Heavy construction equipment should be explicitly included</li> <li><b>Definition of ergonomics and hazard</b> should also be included</li> <li><b>Point (xxxvii)</b> Rather than tent or movable structure, it should be “temporary structures”</li> </ol>	<p>A 1 Yes</p> <p>A2. Welfare is the provision of facilities to maintain the health &amp; well-being of individuals at the workplace.</p> <p>A3. Yes, the exact wording is issue resolution in relation to work health and safety</p> <p>A4. Agreed. May be changed to appropriate and effective implementation &amp; enforcement.</p> <p>A5 both points have different scope</p> <p>A6 National OHS Act shall be considered as Model act where implementation rests with Provinces</p> <p>A7. If we read the Sindh law and the Federal law, there is no major conflict between the two. There are several models of Federal &amp; provincial laws available in the world &amp; we can benefit from their experience. Even under the Factories Act 1934, there were Provincial Factory Rules which were basically all the same.</p> <p>B1 Agreed</p> <p>B2 May be included in Rules and Regulations</p> <p>B3 Yes. HASWA also includes them</p> <p>B4 Yes. Included</p> <p>B5 Process design may be elaborated in rules (xv). Duties of Suppliers mentioned in the Sindh Act address this issue.</p> <p>B6 Can be included</p> <p>B7 Agreed</p> <p>B8 Agreed</p> <p>B9 Agreed. Temporary structures</p>





## Occupational Safety and Health Laws in Pakistan

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	<p>10. <b>Point (xiv) page -9</b> Why only immediate treatment? What about issues related to long term / sustained treatment?</p> <p>11. <b>Volunteer</b> does not include persons on training</p> <ol style="list-style-type: none"> <li>What about internee?</li> <li>What about training engineer?</li> </ol> <p><b>C. National OHS Council</b></p> <ol style="list-style-type: none"> <li>Does ministry in charge means "OPHRD"</li> <li>What about FATA?</li> <li>Why NESPAK only? <ol style="list-style-type: none"> <li>What about environmental protection agencies?</li> <li>What about technical and vocational training authorities?</li> <li>What about medical doctors' associations?</li> </ol> </li> <li>Rules of the procedures is vague at this point</li> <li><b>Point (6)</b> – Invite in what capacity? Member / observer/ consultants</li> </ol> <p><b>D. Functions</b></p> <ol style="list-style-type: none"> <li><b>Accredit</b> – is this council assuming the role of education accreditation w.r.t. safety programs</li> <li><b>Point(f)</b> it is suggested to add "with regard to"</li> <li><b>Point (g)</b> Who will prepare this report? What will be frequency and depth of information? How the safety data collected throughout Pakistan</li> <li>What about the deaths or injuries due to any terrorist act while being at work? Is this considered to be part of OHS jurisdictions or not?</li> </ol> <p><b>E. National OHS Directorate</b></p> <ol style="list-style-type: none"> <li>What will be the area of jurisdictions of Director General? At the start of the act the jurisdictions of Act were defined to be areas under Federal Government. It seems that DG will have larger jurisdictions than Federal Government. It needs to be explicitly defined</li> <li>What's the need for advisory committee when council has already powers to establish committees</li> <li>How council and directorate functions will be integrated? Need to have clear scope</li> <li>Certify OHS training Provider?</li> <li>Inquires / investigation. Is this aligned with inquires and commission Act.</li> <li><b>Point (c)</b> Foreign assistance should be defined clearly. Monitory or Expertise?</li> <li><b>(i)</b> another coordination Committee.</li> <li>Provincial directorate? Who will provide funds for these directorate? Provinces or Federal</li> </ol>	<p>whether stationary, mobile or towable.</p> <p>B10 Covered in definition</p> <p>B11. Covered in worker definition. If they are getting a stipend or pay, they are workers with all the benefits and obligations.</p> <p>C1 Yes, Under the present set up</p> <p>C2 FATA shall be part of KPK</p> <p>C3 Covered in vi and vii</p> <p>C3 Shall be at later stage</p> <p>C5. As consultant or observer for any specialized issue.</p> <p>D1 Accreditation &amp; approval shall not be the mandate of this council.</p> <p>D2 agreed</p> <p>D3 OSH Directorate shall prepare this report giving status &amp; recommendations.</p> <p>D4. Not the scope of the Act</p> <p>E1. Directorate's jurisdiction should end with the Act's jurisdiction.</p> <p>E2 Council is by and large an advisory / consultative body whereas the director is an enforcement body. However, any Advisory Committee formed should be purpose-specific &amp; for a specific / limited time period only.</p> <p>E3 See E2 for difference in the nature of these bodies. Any specific confusions or overlapping should be clarified.</p> <p>E4 This is done in some countries like Australia but not done in most of the countries.</p> <p>E5 OSHA (USA), HSE (UK) Work safe (Australia) do carry out investigations of industrial accidents</p>
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		<p>Government</p> <p><b>F. Functions of OHS Directorate</b></p> <ol style="list-style-type: none"> <li><b>(m)</b> recommends OHS courses, topics, literature, and books for incorporating in the curricula and syllabi of education institutions at what level? School, collage, University, vocational training etc. who will that be executed</li> <li><b>(o)</b> is not the disaster domain of NDMA? What would be different conduct by the OHS directorate?</li> <li><b>(q)</b> Encouragement of NGOs for preventing accident seems relevant but why is “promote sustainable development” mentioned here completely out of context?</li> <li><b>(2)(a)</b> – the inquiry / investigation powers has a function to the OHS directorate seem to be out of jurisdictions of body, such as OHS directorate. It can potentially lead to parallel system of inquiries, specifically with regards to fatal accidents that may occur on workplace. How can there be parallel policing in place?</li> </ol> <p><b>G. Powers of the National OHS Directorate</b></p> <ol style="list-style-type: none"> <li>Is this envisioned to be autonomous body? Is there any precedence to a director having the powers of owning &amp; selling its properties and selling etc? why are such powers necessary for better OHS implementation?</li> <li><b>(d)</b> again, what type of contracts? What kind of liabilities? “things necessary for proper management” and conduct of its business is a vague and broad phrase that can have several meanings. It may create problems at later stage having vague power descriptions.</li> <li><b>(f)</b> “summon and enforce the attendance of any person” is the directorate trying to assume the powers parallel to that of court in legal framework? Why are such power necessary? Wouldn’t such powers against the existing legal system?</li> <li><b>(g)</b> “Search Warrant” Why are policing powers required?</li> <li><b>(h)</b> “confiscation of articles” Why are policing powers required?</li> <li><b>(h)(i)</b> another coordination committee required? Why can’t the provincial DGs can be made part of OHS council?</li> </ol> <p><b>H. Establishment, Powers and Functions of the Provincial OHS Directorate</b></p> <ol style="list-style-type: none"> <li>Is it possible that Federal act asks for the establishment of a body by the provinces after 18th amendment?</li> <li><b>(6)</b> Once again, the provincial directorates can</li> </ol>	<p>to determine culpability as well as to learn lessons and share with other industries</p> <p>E6 Either way, directorate should follow the usual Govt channel.</p> <p>E7 No harm</p> <p>E8 Sindh had already prepared its PC-1 for this.</p> <p>F1. Should be the role of OSH Council. At all levels. Execution would be responsibility of the relevant Education boards, HEC, etc.</p> <p>F2 This refers to industrial disasters – more like process safety accidents at enterprise level.</p> <p>F3. May be changed to developing sustainable safety solutions.</p> <p>F4. OSHA (USA), HSE (UK) Worksafe (Australia) do carry out investigations of industrial accidents to determine culpability as well as to learn lessons and share with other industries.</p> <p>G1. Agreed. He must route such functions thru the relevant govt departments. May be deleted</p> <p>G2 Agreed. Need to be elaborated &amp; restricted in scope.</p> <p>G3 This should be aligned with the powers of the factory and labor inspectors who have such powers but with a limited scope.</p> <p>G4. Again, refer to the powers of the inspectors in Factories act</p> <p>G5 As above</p> <p>G6 Good proposal</p>
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## **ISO 45001 sees the light of the Day**

First international Standard dealing with Occupational Health and Safety Management System has now been published by International Organization for Standardization (ISO) ISO 45001 was published as an International Standard in March 2018. The Indian delegation and US TAG had overwhelmingly voted in favor of the DIS2 when they met in September 2017. Many European members of ISO/PC 283 had a few more issues and some were philosophically against the standard in the first place.

If you recall the history of the ISO 45001 or OHSAS 18001, it was voted down twice by the ISO body. This effort to make it a DIS and a FDIS was also fraught with issues. You may recall that the ILO had a turf war with ISO over who is responsible for Health and Safety standards. Even US delegation had some reservations in the past regarding the publication of this standard fearing that it might dilute the very high standards that have been set by OSHA in U.S.A.

It is now good to know that these issues are behind us. The DIS was then voted down and the DIS2 took some time to make it out of committees. The DIS2 meetings in the US TAG in September were thorough and very democratic. Multiple key issues were boiled down to three show stoppers. Not only was the DIS2 for ISO 45001 voted on quite positively by the ISO/PC TAG 283, but the FDIS and IS was also accepted with a large majority. After the DIS2 was accepted, there were only two options for the FDIS, you either accept it as is or you vote it down. The US TAG accepted it as is with editorial comments.

There is a general feeling that this is a good standard and will help organizations implement and transition from the OHSAS 18001 to ISO 45001. It is also felt that due to the high level structure, the standard will attract many new entrants. ISO 45001 will now replace the OHSAS 18001 standard. It is time to start planning on implementing ISO 45001 if you are already OHSAS 18001 certified.

If you are ISO 9001 certified or have implemented a derivative standard like AS9100, IATF 16949, and/or ISO 14001, consider implementing ISO 45001.

## **Changing risk context for organisations**

The World Economic Forum (WEF) has commented on the increasing volatility, uncertainty, complexity and ambiguity of the world. WEF states that the current competitive landscape can be defined by one word: 'disruption'. WEF states that the ideas of incremental progress, continuous improvement, and process optimizations do not work anymore. WEF acknowledges that these practices are necessary, but are insufficient.

WEF supports the analysis that stakeholders are more engaged today, seeking greater transparency and accountability for managing the impact of risk, while also critically evaluating leadership ability to embrace opportunities. Even success can bring with it additional downside risk, such as the risk of not being able to fulfill unexpectedly high demand or maintain expected business momentum. Organisations and board members need to be more adaptive to change. They need to think strategically about how to manage the increasing volatility, uncertainty, complexity and ambiguity of the world. Following the global financial crisis in 2008, all organisations are taking a greater interest in risk and risk management. It is increasingly understood that the explicit and structured management of risk brings benefits. By taking a proactive approach to risk and risk management, organisations will be able to achieve the following four areas of improvement:

- Strategy, because the risks associated with different strategic options will be fully analysed and better strategic decisions will be reached.
- Tactics, because consideration will have been given to selection of the tactics and the risks involved in the alternatives that are available.
- Operations, because events that can cause disruption will be identified and actions taken to reduce the likelihood of these events, limit the damage and contain the cost.
- Compliance will be enhanced because the risks associated with failure to achieve compliance with statutory and customer obligations will be recognized

Indeed, it is no longer acceptable for organisations to find themselves in a position whereby unexpected events cause financial loss, disruption to normal operations, damage to reputation and loss of market presence. Stakeholders now expect that organisations will take full account of the risks that may cause non-compliance with statutory obligations; disruption and inefficiency within operations; late delivery of projects; or failure to deliver promised strategy



### Changing risk context for organisations

There are an increasing number of risks faced by organisations. Some of these risks relate to managing the organisation and others relate to rapid and/or unexpected changes in the marketplace. Most organisations need to manage risks associated with:

- Variable cost or availability of raw materials.
- Cost of retirement/pension/social benefits.
- Increasing importance of intellectual property (IP).
- Greater supply chain and joint venture dependency and complexity.
- Reputation becoming more important and more vulnerable.
- Regulatory pressures and legislative requirements increasing.

The changes in the marketplace can be even more dramatic and include:

Volatile markets and globalization of customers, suppliers and products.

- Increased competition in the marketplace and greater customer expectations.
- Product innovation and rapid changes in product technology.
- Threats to national economies and restricted freedom of world trade.
- Potential for international organised crime and increased political risks.
- Extreme weather events resulting in destruction and/or population shift.

Management holds overall responsibility for managing risks to the organisation, but it is important for senior management to go further and enhance the conversation with the board and stakeholders. Risk management needs to be used to gain a competitive advantage. Through enhanced risk management, senior management and the board will gain a better understanding of how the explicit consideration of risk may beneficially impact the choice of strategy.

Traditionally, risk management has played a strong supporting role at board level. Now, boards are increasingly expected to provide robust oversight of risk management. ISO 31000 provides important information for boards, so that they can define and fulfill their risk oversight responsibilities. These considerations include governance and culture; strategy and objective-setting; performance; information, communications and reporting; and

the review and revision of practices to enhance the performance of the organisation. However, there is a danger when implementing ISO 31000 that the output from the risk management process forms a stream of management information that is separate from the other information required to successfully manage the organisation. It is important that risk managers undertake their activities in a way that aligns with the current business model and the strategy for the future.

Integrating consideration of risk into existing management activities will ensure that risk information is part of the management information used by executives and board members. This will help overcome the perception that risk management is only concerned with compiling and managing a list of risks and this can be undertaken separately from the day-to-day management of the organisation and the development of strategy for the future.





# Saying That We Aren't Exceeding Earth's



## Carrying Capacity Is Wishful Thinking

Richard Heinberg

**Ted Nordhaus, co-founder of the Breakthrough Institute, has a cheery vision of the future. If only that vision were plausible.**

In his article, 'The Earth's Carrying Capacity for Human Life is Not Fixed', Ted Nordhaus, co-founder of the Breakthrough Institute, a California-based energy and environment think tank, seeks to enlist readers in his optimistic vision of the future. It's a future in which there are many more people on the planet and each enjoys a high standard of living, while environmental impacts are reduced. It's a

cheery vision.

*If only it were plausible.*

Nordhaus's argument hinges on dismissing the longstanding biological concept of "carrying capacity" - the number of organisms an environment can support without becoming degraded. 'Applied to ecology, the concept [of carrying capacity] is problematic,' Nordhaus writes, arguing in a nutshell that the planet's ability to support human civilization can be, one presumes, infinitely tweaked through a combination of social and physical engineering.

Few actual ecologists, however, would agree. Indeed, the concept of carrying capacity is useful in instance after instance - including modelling the population dynamics of nonhuman species, and in

gauging the health of virtually any ecosystem, be it ocean, river, prairie, desert, or forest. While exact population numbers are sometimes difficult to predict on the basis of the carrying capacity concept, it is nevertheless clear that, wherever habitat is degraded, creatures suffer and their numbers decline.

The controversy deepens in applying the carrying capacity concept to humans. Nordhaus seems to think we are exceptions to the rules. Still, as archaeologists have affirmed, many past human societies consumed resources or polluted environments to the point of collapse. Granted, societies have failed for other reasons as well, including invasion, over-extension of empire, or natural climate change. Yet in cases where societies depleted forests, fisheries, fresh-





water, or topsoil, the consequences were dire.

But that was then. The core of Nordhaus's case is that we are now living in a magical society that is immune to the ecological law of gravity. Yes, it is beyond dispute that the modern industrial world has been able to temporarily expand Earth's carrying capacity for our species. As Nordhaus points out, population has grown dramatically (from less than a billion in 1800 to 7.6 billion today), and so has per capita consumption. No previous society was able to support so many people at such a high level of amenity. If we've managed to stretch carrying capacity this much already, why can't we do so ad infinitum?

To answer the question, it's first important to understand the basis of our success so far. Science and technology usually glean most of the credit, and they deserve their share. But sheer energy - the bulk of it from fossil fuels - has been at least as important a factor.

With lots of cheap energy, we were able to extract raw materials faster and in greater quantities, transport them further, and transform them through industrial processes into a breathtaking array of goods - including fertilisers, pesticides, and antibiotics, all of which tended to reduce human death rates.

But there was still another essential factor in our success: nature itself. Using science, technology, and cheap energy, we expanded farmlands, chain-sawed forests, exploited fisheries, mined minerals, pumped oil, and flattened mountains for their buried coal. And we did these things in a way that was not remotely sustainable. By harvesting renewable resources faster than they could regrow, by using non-renewable resources that could not be recycled, and by choking environments with industrial wastes, we were borrowing from future generations and from other species.

Nordhaus writes: "For decades, each increment of economic growth in developed economies has brought lower resource and energy use than the last." This trend of severing the tie between GDP and energy/materials throughput is called "decoupling." Many economists make big

claims for past decoupling and promise much more of it in the future. But careful analysis of decoupling to date shows that most is attributable to accounting error. And to get the developing world up to the level of an average American's energy usage would require nearly quadrupling global energy consumption, even assuming advances in efficiency. So, unless we find ways to make decoupling actually happen in the future more reliably and at higher rates, growing the global economy will require us to use more of the Earth's

nucopian economists who perceive no problem in the expectation of endless growth on a finite planet likewise failed to foresee climate change, the exponential increase in extinction rates primarily as a result of human-caused habitat degradation, the collapse of fisheries from overfishing, and much, much more.

How can we judge whether cornucopians, or so-called Malthusians, will be right in the long run? One way would be to keep a running account of key biophysical factors on which the prospering of our species



depleted resources.

It is true that some past warnings about the consequences of overpopulation and overconsumption, framed as forecasts, proved wrong. Thomas Malthus famously thought famine would engulf humanity within decades; it didn't. He failed to foresee industrial agriculture. Paul Ehrlich thought rapid population growth would lead to catastrophe in the 1980s, but he failed to anticipate the impacts of globalisation and debt - which enables us to consume now and pay later. Peak oil analysts didn't foresee the fracking frenzy. Yet cor-

depends. If an alarm bell sounds for any of those key factors, we should sit up and pay attention. After all, Liebig's Law (another foundation of ecology) tells us that growth limits are set not by total resources available, but by the single scarcest necessary resource.

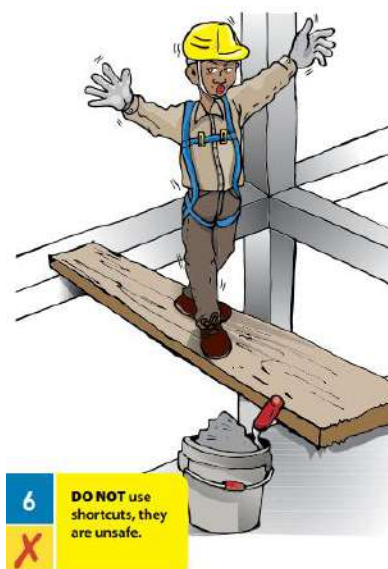
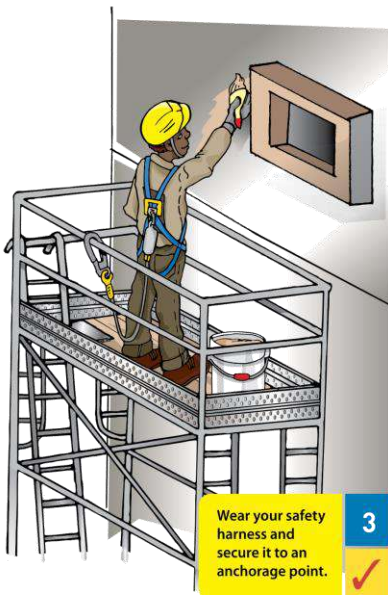
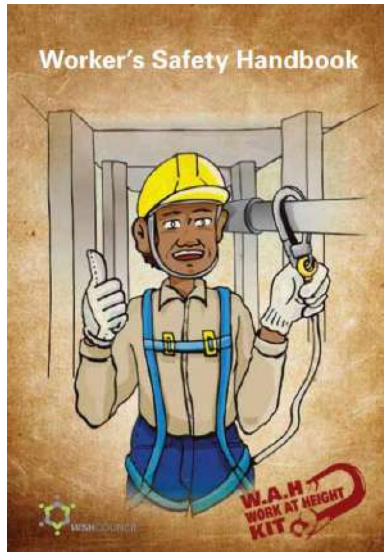
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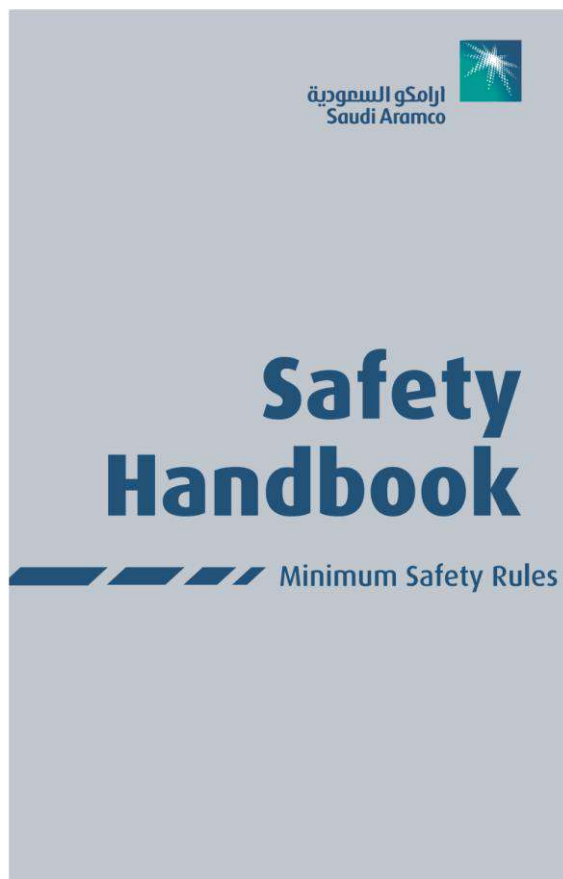
## Toolbox Talk: Eye Safety

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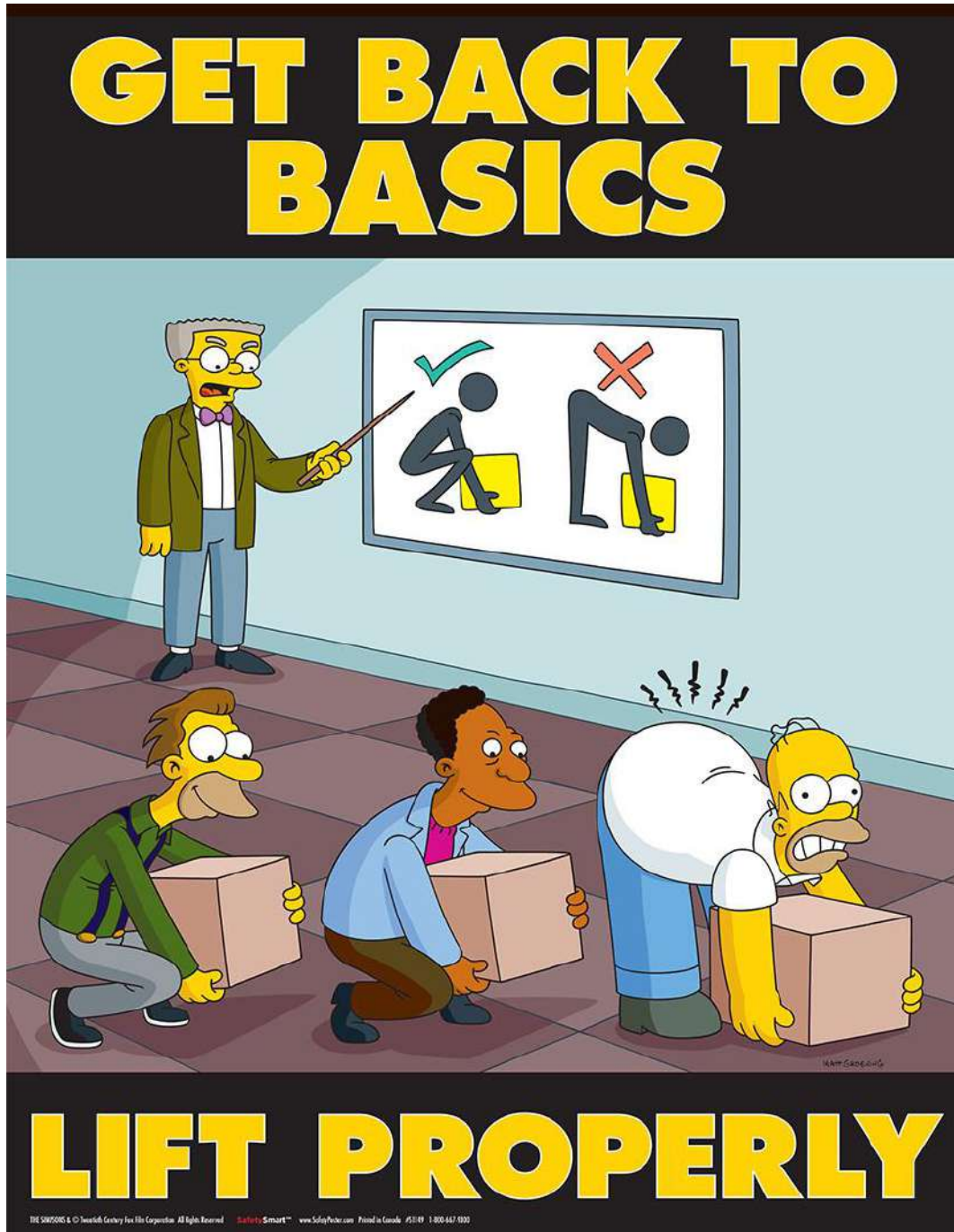


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Engineering Solutions... Delivering Results



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