

An Update on ISO 14,000 Series Related Activities

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An Update on ISO 14,000 Series Related Activities

Faisal Haq Shaheen¹

I. Introduction

For many years, industry and environmentalists have been at odds over the issue of environmental protection. Conceptually, long-term sustainable conservation efforts can be positively affected by changing the daily operations at hundreds of thousands of production, storage and distribution facilities around the world. The International Standards Organization (ISO) 14,000 series has been a follow up to the quality oriented ISO 9,000 series of standards and is designed to enable business and organizational entities to measure, monitor and manage their environmental impacts that result from day to day activities. Mostly the industry-led initiative is changing the way businesses operate and perform both qualitatively and environmentally on a daytoday basis. The theory is that environmental performance can be achieved by increasing environmental management effectiveness.

As developing nations struggle to build their economies around ‘export led growth’, the ISO series of standards have become flags with which the buyers from the developed nations can differentiate between firms having capacity to meet standards and those that may not possess such a capability. The presumption is that the firms, which are concerned with quality and/or environmental impact, will be proactive in marketing by complying with a recognized Total Quality Management (TQM) or Environmental Management Standards (EMS), whereas the firms, which are not proactive, will not meet these standards.

At present, developing nations rely on developed countries audit firms to perform auditing functions for them. Technical assistance and expertise mobilization may make it possible for Southern countries to develop their own ISO 14,000 accreditation bodies to manage and audit activities of local audit firms.

II. The ISO Standard Setting Process

The ISO has seven main institutional components: National standard bodies, a general assembly, a council, policy development committees, technical management board, technical committees and technical advisory groups. The ISO organization comprises 131 national standards bodies, each representing a different country. The ISO members are stratified into member bodies as correspondent, subscriber and liaison members, depending on a level of activity that a country can afford, and wants to engage in, with respect to the standard creation process.

While standards are being developed by standards organizations from around the world, government environmental agencies and public interest groups on environment have not been actively involved in the development process. This will have significant implications for acceptance of the standards in future, particularly by public interest groups and developing nations.

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Currently, the ISO standards are developed through a consensus process involving voluntary participants. The ISO 14,001 standard allows companies, or their third party organizations to certify that their environmental management system meets the ISO specifications. The ISO standards are voluntary but are often made mandatory by member countries.

The technical work of the committees is highly decentralized, carried out in a hierarchy of some 2,850 technical committees, (TC) subcommittees and working groups. Most of the drafters of the standards are industry representatives and the initiatives are also industry led. The stages of drafting are:

A. *Proposal and Preparatory Stages, TC 207*

- Proposals are made by full members or executive management.
- Preparatory stage – A TC participates in drafting of an international standard. The TCs are largely independent of the ISO Secretariat. For example, TC 207, chaired and funded by the Standards Council of Canada, is responsible for the development of the ISO 14000 series of environmental management system standards and 6 subcommittees have been formed under it. All ISO members have the option to participate in any TC.

B. *Committee, Inquiry and Approval*

- Committee Stage – The ISO secretariat distributes the draft of a committee among members for comments. Once consensus is reached, the text is finalized for submission as a draft technical standard. The consensus, however, needs not imply unanimity.
- Inquiry Stage – The draft is circulated to all ISO member bodies for voting and comments.
- Approval Stage – The final draft is circulated for voting to all ISO member bodies. Their comments are registered for future revision.
- Publication Stage – Once a final draft international standard is approved, only minor editorial changes are made in the final text. Then it is sent to the ISO central secretariat for publication.

III *ISO 14,000 Series*

A. *Published Standards*

The International Standards Organization has published the following standards.

| | |
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| ISO 14,001 | deals exclusively with effective environmental management systems (EMS). |
| ISO 14,004 | assists those organizations interested in obtaining additional guidance on design and implementation of an EMS. |
| ISO 14,010 | is intended to guide organizations, auditors and their clients on general principles of the execution of environmental audits. |
| ISO 14,011 | is designed specifically for auditing of the environmental management systems. An international EMS standard must be assessed and verified in a common and consistent manner if certification is to be credible. |
| ISO 14,012 | establishes common qualification criteria for environmental auditors. |
| ISO 14,020 | sets general guidelines for different types of labels. |
| ISO 14,040 | represents life cycle assessment, principles and guidelines. |

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| ISO 14,050 | represents environmental management vocabulary. |
| ISO 14,061 | provides information to assist forestry organizations in the use of ISO 14,001. |
| ISO 14,004 | EMS standards. |

ISO 14,001 and Sustainable Forest Management: the bridging concept

The ISO 14,001 provides a sound management system for achieving environmental objectives. However, the ISO 14,001 does not specify absolute environmental performance requirements. This dilemma has been addressed to some degree with respect to forestry management.

While principles, criteria and indicators for sustainable forestry management contain general performance requirements, they do not provide details of what these imply for a specific forest in a specific context, and how these should be achieved. Therefore, a combination of both approaches is needed for those forestry organizations that want to assure their stakeholders that their forest management will improve continually towards the ultimate goal of achieving Sustainable Forest Management (SFM). This idea has evolved into the so-called “bridging concept” that forms the basis of the ISO Technical Report 14,061. The “bridge” between the management systems links the following two points:

- The approach of ISO 14,001, specifying tools, needed to establish and achieve an organization’s environmental policy without specifying absolute performance levels
- The broad performance benchmarks for SFM are developed through various international processes whereby the standard provides policy objectives that should be achieved without specifying what goals and targets should be set at the level of a specific forest area. Furthermore, it leaves open the issue of how to manage an organization’s environmental aspects to ensure that these policy objectives and targets are achieved.

The “bridging concept” shows a way forward to “lasting Sustainable Forest Management”.

ISO/TR 14,061

The ISO/TR 14,061 is designed to be used in conjunction with the ISO 14,001. It provides a link between the management system approach of the ISO 14,001 and the range of forest policy and forest management performance objectives, including principles, criteria and indicators of the SFM that a forestry organisation can consider. It also provides definitions, background information and reference material and describes the relationship between the SFM principles, criteria and indicators and a forestry organization’s EMS. The ISO/TR 14,061 report concludes with chapters on the application of the EMS based on the ISO 14,001 to small-scale forest ownership and operations, options for demonstrating the effective implementation of the EMS (varying from self-declaration to third party certification) and the ways to communicate this. Annexes contain more detailed information on inter -governmental organisation initiatives and case studies on implementation.

B. Standards In Progress

| | |
|------------|--|
| ISO 14,015 | deals with environmental aspects of sites and entities. |
| ISO 14,021 | sets standards that are informative environmental self-declaration claims type II eco labels. ² |

² Eco labels are segregated into type I, II or III based on the amount of information required or the standards that are incorporated into the label.

- ISO 14,024 sets standards for type I eco labels which are selective ones that determine environmentally preferred products within a specific product group, based on life cycle considerations.
- ISO 14,025 sets standards on technical reports for type III eco labels that are not selective and provide quantified environmental life cycle product information, to be provided by a supplier, based upon independent verification using pre-set criteria.

The development of these broad standards is an area that Southern countries must monitor. As many countries continue to embrace various elements of the ISO 14,000 into their legislative settings and policies, the TC 207, as of August 1999, has made significant progress in this area. Emphasis is being placed on four key elements of the ISO 14,021:

- *Requirements for all claims.* These give basic rules for making environmental claims.
- *Use of symbols.* This deals with the fact that many claims for products are made not just because of the use of text, but also by using pictures and symbols, etc.
- *Evaluation and claim verification requirements.* Essentially this requires that claims must be verified before they are made, and that this information must be available on request to any person.
- *Specific requirements for selected claims.* This recognizes that some claims are used more frequently than others (for example recyclable, biodegradable, etc.), and provides for specific requirements in the use of such claims.

- ISO 14,031 Standard on environmental performance evaluation according to the ISO/TC 207/SC 4.
- ISO 14,032 Environmental Performance Evaluation - Case studies illustrating the use of the ISO 14,031.
- ISO 14,041 Life Cycle Assessment - This standard on life cycle assessment is required by the type III labels, but not necessarily the type I or type II. The degree, to which the “cradle to grave” analysis of a product’s environmental impacts is considered, is not yet clear.
- ISO 14,042 Life Cycle Assessment Impact Assessment.
- ISO 14,043 Life Cycle Assessment Interpretation.
- ISO 14,049 Examples for application of the ISO 14,041.

IV. Global Recognition

The ISO 14,000 standards have drawn mixed reactions worldwide from various government, industries and civil society stakeholders. Interestingly supra national bodies, such as the WTO, have also reacted to the standards series.

A. Government Reaction

Regulators have expressed an interest in the potential value of these kinds of voluntary regulatory approaches, particularly as privatization of the environmental monitoring task places fewer burdens on the public sector to fund field officers to monitor industry. The OECD member countries and Canada and Singapore (See chapter 7) have started to substitute voluntary mechanisms for traditional command and control monitoring.

The benefits of voluntary monitoring programmes include:

- Proactive and increased compliance with environmental regulations;
- Reduction in an organization's costs of compliance;
- Internalization of monitoring costs;
- Requirement to comply with other codes or charters, including internal company standards and industry standards.

The `problem is that verification is still left with the organization. Third party audits can and are used as a verification mechanism and can broaden the scope of an organization's environmental requirements.

B. Industry Reaction

As the ISO 14,001 EMS standard is relatively new, there have been a few conclusive studies on the effectiveness of the ISO 14,001 EMS standard in improving environmental performance. However, the evidence to date suggests that the ISO 14,001 can be an effective tool for improving environmental performance. Industries in certain regions are taking strongly to the ISO 14,001 standards. Over 50 percent of Japanese industry groups mention the ISO 14,001 in their individual action plans.

The supplier requirement has not yet been written into the ISO 14,001 standard. The only element of the standard where direction is given on supplier issues is in 4.3.1 where it requires the organization to address all significant environmental aspects over which it has control in its environmental objectives. Arguably, a firm has a control over 'who' the suppliers are and it should consider the relative impacts of its supply chain when making procurement decisions. The rumour among Northern-based registrars is that the revised versions of the standards will require that suppliers be certified to an ISO 14,000 standard. There is a growing strategic trend in supply chain management where some companies are requiring their suppliers to become the ISO 14,001 certified.

Currently, 5000 firms worldwide are registered to the ISO 14,001. Of the businesses that are not yet the ISO 14,000 certified, many have brought their EMS into compliance with the ISO 14,001 and are waiting to see if it becomes a consumer requirement before investing in the certification process. Many are taking the wait and see approach due to the following reasons:

- Unsure whether the ISO 14,001 EMS is better than those that are already in place;
- Ambiguity in the management system with respect to interpretation;
- Bureaucratic red-tapism and more paperwork will not be accepted or maintained by staff;
- Top down approach (which contradicts modern management principles);
- High implementation costs will tie up short term cash flows;
- The ISO 14,000 standards are less rigorous than their existing EMS.

The last point leads to the following question;

Can the ISO 14,001 as a baseline international standard, offer environmental management systems representing best practice? If not, can some form of it still be useful?

If insurance companies, banks and governments decide so, companies will have to comply with it. Increased stock prices, liability and credit risk can be managed by an EMS and is, of course, of the most interest to insurance companies (manage risks) and banks (ISO 14,001 may become part of credit evaluation).

C. International reaction

The main benefits of the standard are: it assists organizations to efficiently comply with regulations, internalize monitoring costs and address the breadth of additional issues that may only be given lip service in the organizations' corporate environmental policy. This will hopefully reduce the adversarial relationship between environmental regulators and industry groups.

Major international issues pertaining to standards include:

- Proposed formal integration of the ISO 14,001 EMS standard in the European Commission's Environmental Management and Audit Scheme (EMAS).
- The decision to promote the ISO 14,001 was taken by the environmental ministers at APEC's cooperation forum in July 1996.
- A proposal to design a meso American system for accreditation and environmental certification and to build capacity in the South American region.

The following lists the reactions to date of the countries around the world that are looking to the ISO 14,000 series to bridge gaps, and fill voids within their current regulatory frameworks:

| | |
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| Australia | The government requires an EMS, not necessarily certification to the ISO 14,001. The government removed references to the ISO 14,001 from procurement contracts, claiming it hurts SMEs. |
| Canada | Tax credits are being provided by the provincial governments to the ISO 14,001 registrees. Punishments are also being doled out in the form of requiring certification (the most popular case being of the toxic waste violation at a Bata facility). |
| China | Established a federal committee to introduce the ISO 14000 series in China as National Standards. All government contractors must be the ISO 14,001 certified. |
| Indonesia | Standardization Council of Indonesia has formed 6 working groups to design a certification programme. |
| Japan | The nation's basic environmental plan encourages the introduction of an EMS into companies as an effective tool to deal with environmental issues. The Ministry of Trade and Industry has been preparing environmental management plans that conform to the ISO 14,001 requirements and are aiding industry in developing sector by sector protocols for certification. Ordinances have been issued exempting the certified companies from frequent inspections and reporting requirements. |
| Korea | Requires leading companies to achieve certification. The Ministry of Environment is implementing a programme for environment friendly companies that require an EMS, assessment and improvement plan and a demonstration, in this regard. |
| Malaysia | encouraging industry to adopt ISO 14,000. |
| The Netherlands | The Ministry of Public Works is working to implement an EMS in accordance with the ISO 14,001. |
| Sweden | Promoting integration of the EMS into government operations. |
| Thailand | Economic and Social Development Plan will include a commitment to the ISO 14,000 implementation. Agricultural ministry is applying the ISO 14000 to all Thai farm products. |

United States The US Environmental Protection Agency (EPA) may waive routine inspections when companies can that the prove programme is in place to meet environmental standards. The EPA is also discussing with other federal agencies the potential use of the ISO 14,001 in conjunction with procurement policies.

The UNCTAD, in cooperation with the Government of the Netherlands, is promoting a series of studies on the implications of the ISO 14,001 for developing countries.

The project in India has studied:

- Why Indian companies are adopting the ISO 14,001?
- Constraints and opportunities for adopting it.
- Composition of Trans-National Corporations (TNC's) and local firms adopting it.
- The facilitating mechanisms that the government has put in place for adopting and certifying it.

D. *World Trade Organization Linkages*

The WTO trade law may give the ISO 14,001 authority over other national approaches to the EMS frameworks. In effect, the ISO 14,001 may become a benchmark, to which other environmental management certification systems are compared to, while deciding if they are compatible with the WTO trade law. The way, in which this might be introduced may be considered under the WTO agreement on technical barriers to trade (TBT).

Non-harmonized standards across countries and regions can contribute to the TBTs. Where they are relevant, the WTO members may use them as a basis for their technical regulations, except, when such standards or parts would be ineffective or inappropriate. By promoting international standards, the WTO trade law encourages the harmonization of national standards to ensure that trade facilitation is an intent behind standardization and regulation. International standardization activities have expanded as exporters have responded to pressure. Some governments are not writing new standards rather adopting international ones. The ISO is being recognized as a supporter and partner to expand the WTO programme to promoting free and fair trade.

The ISO is also acting as depository for organizations that have signed the code of good practices for preparation, adoption and application of standards. Adherence to the code of good practices is an important aspect and should be encouraged by the Southern representative standardizing body. Failure to do so may lead to disputes standardizing bodies regarding legitimacy as to which codes will prevail in global interactions.

V. *Causes for Concern*

There are a number of concerns that surface regarding the ISO 14,001 process. Many of them are linked to the way that the standardization process is structured at present as well as how technical resource and representation is achieved, particularly, from the Southern nations.

A. *The ISO Process*

The process itself does not ensure the involvement of a broad constituency. The extent to which the ISO TC-207 adequately represents the developing countries is questionable. Also, environmental groups feel

excluded from providing input as the process is dominated by industry. High costs of participation result in less than proportional distribution of voting rights across nations of varying levels of development. Developing nations feel that the ISO standards do not adequately take their interests into account. The ISO should, therefore, review its internal processes to increase developing countries participation. This is, especially, important as implementation of the ISO 14,001 standard and its ripple effects are expected to be most burdensome on the developing world. While the ISO policies allow for comment and stakeholder's participation, there is little constructive involvement from the developing nations or environmental communities.

B. The link between Certification and Environmental Performance

The global environmental movement must realise the weak link between certification and environmental performance. The certification does not guarantee an outstanding or even at par environmental performance. However, if certification is to be given any indication of environmental responsibility, it must consider or illustrate a degree of environmental performance. While setting specific levels of emissions and discharges unattractive to firms, the EMS must consider environmental performance to be credible. At the same time, it is feared that Southern interests will be excluded from the process if environmental performance is determined only by Northern stakeholders.

C. Public participation and transparency

Credibility requires a link between objectives and performance. As the standard does not establish a relationship between the two, it lacks credibility. Transparency thus must be required in the setting of targets and in conducting of maintenance audits. The ISO 14,001 requires procedures to be set up to receive comments and concerns from the interested parties, but it does not require a response to them. Also, the definition of significant environmental aspects is also left the firm. There is no guarantee at present that the current standard ensures public participation in an effective and responsible manner.

D. Technical Barriers to Trade (TBTs)

The TBT agreement links requirement of international trade law with the content of international standards. It gives guidance to those adopting national standards and in case of a dispute, the burden of proof is on the country that deems the standard inappropriate. The problem from a developing nation's perspective is that this favours the content of the international standard itself and questions any decision to stray from it.

E. Need for Guidance in the Standard

Negotiating environmental standards in a generic international standard is impossible. Variable impacts, sectoral differences, national variations and scientific uncertainties make the task of completely harmonising standards impossible. While the ISO 14,001 doesn't offer a lot of guidance, it could conceivably provide more guidance for a firm to address all of its environmental impacts in addition to the significant ones, and make continual improvement an integral part of the standard. The sector-specific technical reports are also a good first step taken by the ISO 14,000 (THE ISO 14,004 for forestry/ISO TR-14,061). Documents can, then, address environmental management at the sector specific level and depart from a generic approach.

F. Considering International Agreements

The inclusion of multi-lateral environmental agreements in promoting environmental responsible management is also of concern to developing countries. In order to promote the development of environmental policies and the setting of effective objectives and targets, the ISO refers to existing laws, regulations and requirements. There is a gradient of common interests from the country to national, region and international environmental levels. So, there will be and must be some overlap and flexibility to satisfy all parties. The principle of subsidiarity should apply to environmental responsibility. The requirements of certain MEAs are similar to the ISO 14,001 standard in which they are general and flexible. The Convention on Biological Diversity makes general recommendations on how to integrate bio-diversity conservation into policy and planning, without specifying strict performance requirements. The ISO 14,001 does not refer to the work done under MEAs nor does it mention their existence.

VI. Recommendations for stakeholders in the South

A developing countries participation is a key to ensuring that the ISO 14,000 series of standards attain some level of legitimacy. In order to achieve this goal, there is some recognition that the developing countries will need assistance in establishing the necessary infrastructure and institutional capability to manage and maintain standardization and auditing competence and capacities within their markets.

- The ISO 14,001 needs to be developed by a representative group if it is to gain legitimacy. The UNCTAD alongwith many other developing nations has called on the ISO to reform its processes to allow for broader public comments and participation. The South should push for more transparency and concrete measures to encourage public comment and equal representation from the developing world on the standards development process. Perhaps, a web-based development process could be promoted to allow developing nations, without funds to participate at the meetings to comment on and monitor the activities. A system of proxy votes may be introduced to ensure that the countries that are not able to attend meetings are represented by a like-minded group. Holding meetings in developing nations (which will provide cost savings to Northern representatives) should be encouraged.
- The South should consider applying elements of the ISO 14,000 at the national level. The actions aimed at facilitating the EMS implementation in developing countries should focus on:
 - Awareness-building among the concerned stakeholders;
 - Identification of sources and dissemination of information;
 - Creation of infrastructure, training of auditors and consultants;
 - Assistance in development and implementation related legislation;
 - Support for participation in the relevant forums and for sharing experiences in the implementation of the EMS. The experts have urged the need for a special financial and technical assistance for the LDCs in implementation of the ISO 14,001 standard at their national levels.

If a government can illustrate how certification of internal systems to the ISO 14,000 can benefit in running public sector entities and businesses, then in the promotion the private sector will become easier.

- The governments should lobby for the existing country-specific performance standards, levels, targets and objectives and policies to be included in environmental performance aspect of the standard. This will protect the developing nations from a context dependency, while still incorporating performance standards. It will also serve to build capacity of developing nations at institutional level, if their standards are recognised and encouraged for development.

- The governments should monitor the activities of the TC 207 with great care. A non-governmental organization (NGO) dialogue is being facilitated and looked at by the TC 207 group. It should be encouraged by the governments. The NGO participation at ground level could also serve to address the issue of legitimacy and environmental performance.
The last plenary session of TC – 207 concluded with 36 resolutions. Five major items topped the discussions. These were:
- Resolutions to assist the developing countries to ensure their active participation in the work of ISO/TC 207,
- Resolutions to assist the NGO interaction with the ISO/TC 207 standards, and to continue dialogue with the NGOs,
- Resolutions to continue the dialogue with Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) on the possible the ISO standards related to climate change and climate technology, with TC-207 taking a lead role,
- Resolutions to note that France and Korea will issue a new work item proposal to develop a document on “Design For the Environment”, and
- A resolution to create a Spanish task force to work on translation of the ISO 14,000 standards into Spanish.

The following issues were also discussed:

- It was established that the main elements of compatibility between the ISO 14,001 and the ISO 9,001 had been achieved. The Strategies Implementation Group (SIG), which met on May 28th, 1999, validated this compatibility.
- The Climate Change/Climate Technology initiative got a strong boost as the TC- 207 declared its will to lead the ISO drive with coordination efforts continuing within the ISO structure and with the UNFCCC.
- The 7th meeting of the ISO/TC 207, *Environmental management*, was a success. The delegates were happy that the TC 207 continues to be a leader as it breaks new ground. The TC 207 had accepted the Swedish invitation to hold its 8th plenary session in Stockholm in June 2000.
- There is a need to encourage industry groups (especially the growing number of dirty industry groups) to participate where possible. A proactive approach towards the ISO 14,000 and standardization in general may allow for greater awareness and education of industry with respect to meeting the standards in child labour, health and safety issues and awareness in general of environmental issues that are sector specific. Such standardization will also allow for differentiation between the firms that engage in such practices from those that do not. Particular emphasis should also be on how the SMEs can be organized and leveraged to compete in global market place through adoption of such standards.
- The South should encourage cooperation between the SMEs and larger firms to ensure that the informal sector is not left out of the process of certification.
- A best available practical approach should be pushed for by the South to ensure that they are given space and empowered to choose practices and definitions of environmental friendliness that suit their specific environmental and ecological make up. It should also be emphasised that Japan, France and the Netherlands instituted similar approaches in the 1960s with much success.
- There is a possibility that Southern suppliers may be pressured to demonstrate the ISO 14,001 certification and failure to do so could result in barriers to trade and/or detract from the environmental objectives of setting up an EMS. Ideally, foreign corporations should establish supportive co-operation with their suppliers in the area of the EMS implementation. Trans-national corporations (TNCs) could play an important role in this regard.

- General reference to the guidance could be made within an international environmental management standard. The ISO TR-14,0601, for example, lists many international agreements where forestry is discussed.
- Work as observers while maintaining minimal expenditure. Work to disseminate information to firm leaders and trade associations and clusters. Work towards establishing a like-minded group within the developing nations to ensure that the Southern concerns, specific to sectors of interest, are heard.
- The ISO 14,000 is being used in the North to manage risk and attract investors. From the South's perspective, using such a strategy is also suitable given the desire to encourage recycling of local investment and increasing savings.
- As the formulation of the ISO 14,000 series will affect the efforts of the developing country businesses to gain access to the developed world clients and markets, the South should encourage active participation from industry. Mature firms with strong export interests should be encouraged to:
 - Monitor the ISO 14,001 development activity specific to their sector,
 - Establish in house EMS (benchmarked informally with the ISO 14,000) and examine success through marketing to foreign firms,
 - Consider the impact of global standards on the South's producers and identify ways in which the required process of upgrading can be facilitated,
 - Explore the role of key local and external agents in this process (donors, domestic buyers, and international buyers, trade associations, government agencies).

The risks to the South include loss of jobs through the import of foreign, capital intensive technology, buy out of local firms which support the local business culture and an increased presence of foreign influence through this MNCs and TNCs which will further threaten sovereignty. However, instead of dwelling on this, the focus should be on the development of the strongest sectors, niche players and sustainable industrial production.

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