Ballast Water News

Global **Ballast Water** Management Programme

ISSUE 5 APRIL - JUNE 2001

From the Editor

"Ships? We come, we go, who cares?" These eloquent words from the Chief Officer of a foreign vessel visiting a New Zealand port in 1996, provide a clear benchmark of how far we have progressed, yet how far we still have to go, in addressing the ballast water 'problem'.

Today, many care. Global awareness and concern about the problem of ship-mediated marine bio-invasions is growing rapidly. The number of queries and requests for assistance received by the Programme Coordination Unit has skyrocketed in recent months, indicating that our extension and outreach activities are beginning to have impact. Every day through our information clearing-house network we learn of more and more new initiatives being developed in response to this problem, in all corners of the world. In this issue of Ballast Water News we provide a sample of these, with reports on activities conducted both within GloBallast and by others.

In issue 4 we announced the retirement of one of the founders of the GloBallast programme, Mr Philip Reynolds. We are pleased to have Mr Reynolds as our Guest Speaker in this issue, where he presents a personal perspective on the programme.

We continue to discuss the currently hot topic of ballast water treatment, and present some views on the need for caution and transparency in evaluating the effectiveness and performance of new ballast water treatment systems.

Recent action by the Caspian Environment Programme to develop an emergency plan in response to a potentially severe marine invasion is described. Of note is an article on the approach being taken by China, to prevent harmful algae blooms being taken-up by ships in Chinese waters and exported to other countries. China is to be commended for acting to address the problem at source, thus helping to protect the marine environments of its trading partners.

To date the majority of concern and action has focussed on the point of discharge, where invasions occur. I have always been a strong proponent of shifting the current emphasis away from this outdated 'end-of-the pipe' approach towards a greater focus on the source of the problem and preventing organisms getting into ballast tanks in the first place. This must be a more effective and sensible approach.

Professor Moira McConnell of the World Maritime University provides us with an update on the all-important legal project now well underway in each GloBallast pilot country, and we are also pleased to include our first Letter to the Editor. It is hoped that more such letters will be received in future, helping to stimulate constructive debate and discussion.

Steve Raaymakers
Contributing Editor

From the Programme

It has become increasingly evident that the GloBallast programme has steadily gained essential credibility and momentum in the international arena. A major event this quarter was the 46th meeting of IMO's Marine Environment Protection Committee (MEPC), held from 23 to 27 April. Substantial progress was made on the new ballast water convention. One of the main gaps remaining is standards for new ballast treatment systems.

The efforts of GloBallast to address this gap, in convening the 1st International Ballast Water Treatment R&D Symposium and Standards Workshop in March, were acknowledged at MEPC 46. The outcomes of the workshop were adopted as the starting point for a newly established correspondence group, charged with developing treatment standards for consideration at MEPC 47 in March 2002.

Another important meeting, which took place in June, was the 86th session of the IMO Council, the executive organ of IMO. The Council approved the proposal for a Diplomatic Conference to be held in 2003, to adopt the new ballast water convention, and considered the establishment of a permanent technical support capability from IMO's regular budget.

IMO's determination to progress this convention is a significant contribution towards the worldwide campaign to prevent, detect, eradicate and control invasive alien species, described by the Executive Director of UNEP as the most important threat to biological diversity after habitat destruction.

A reference point in the development of GloBallast is the commencement of strategic planning for the future of the programme. When the current phase draws to an end in March 2003, it is likely that the international community will be on the verge of adopting the new ballast water convention. IMO will have to be prepared to assist member countries with implementation.

A number of countries have voiced concern that GloBallast will end before the new convention is adopted, and other countries and regions have expressed interest in joining the programme. By March 2003 we will have begun regional replication of the six initial demonstration sites. Continued programmatic support will be required for these regional initiatives. We have therefore commenced development of a concept paper for GloBallast Phase II and will be consulting all stakeholders in the coming months.

Finally, I would like to bid farewell to Mathew Baker, our Administrative Assistant who left us in June to pursue further studies in Canada. Mathew joined the PCU at its inception and contributed enormously during his very full 12 months with us. I wish him all the best with his academic studies and future career.

Dandu Pughiuc
Chief Technical Adviser

Ballast Water News is the quarterly newsletter of the Global Ballast Water Management Programme (GloBallast). GloBallast is a cooperative initiative of GEF, UNDP and IMO to assist developing countries to reduce the transfer of harmful organisms in ships' ballast water, through the implementation of IMO ballast water management guidelines.

For further information please contact:

Programme Coordination Unit, Global Ballast Water Management Programme
International Maritime Organization, 4 Albert Embankment, London SE1 7SR, UK
Tel +44 (0)20 7587 3247 or 3251. *Fax* +44 (0)20 7587 3261
Email dpughiuc@imo.org or sraaymak@imo.org *Web* http://globallast.imo.org

Guest Speaker

Mr Phil Reynolds
Former Chief, UNDP Water Programme

Over the past few weeks I have reflected on 35 years of service with United Nations agencies, country offices and funding bodies. It has become clear to me that UN agencies like IMO and UNDP provide a unique framework for organizations and their representatives to collaborate in a manner which enhances their individual contributions, and enables them to move beyond mere representation to partnering.

Some of the factors favouring such partnering are; the right cause (one which commands full commitment), the right time and the right people. When the mix is right, great things can happen.

I believe that the GloBallast programme enjoys a favourable mix of these factors.

It has become increasingly apparent that ballast water is a major carrier of invasive species, which have racked economic and social havoc on developed and developing countries alike. Recent newspaper articles have stimulated public awareness of what scientists have known for years. There is now a critical mass of political support for a global ballast water convention. A diplomatic conference for this purpose is foreseen in 2003. Thus, both the cause and the time seem right for the GloBallast programme and its efforts to enhance the capacity of developing countries to implement this new convention when it is approved.

Beginning in 1994, IMO's Marine Environment Protection Committee established a Ballast Water Working group under the able leadership of Denis Paterson of Australia. Manfred Nauke, the IMO staff member who served as Secretary to this group, helped to organize basic research and study of the issue. The Ballast Water Working Group moved steadily towards getting both MEPC and the IMO Assembly to accept the need for a ballast water convention.

Over this same period, the Global Environment Facility in collaboration with UNDP, UNEP and the World Bank, was developing a series of operational programmes, including on pollution and global support. Given the slow rate of project submissions against this programme, Mr Al Duda of GEF encouraged UNDP and the other implementing agencies to move ahead in this area and suggested ballast water management as a potential project focus.

This launched a process of project conceptualisation and formulation by UNDP and IMO. It began with a period of education and confidence building on both sides. Mr Oleg Khalimanov, Henning Brathaug and Manfred Nauke at IMO worked with Andy Hudson and myself at UNDP. During this preparatory phase, the project team received encouragement from the IMO Ballast Water Working Group, where the voice of developing countries was increasingly heard.

Once the full US$ 7.4 million programme was approved, UNDP and IMO representatives, who by then had become true partners, chose Dandu Pughiuc and Steve Raaymakers to manage the programme as Chief Technical Adviser and Technical Adviser respectively. They have proven to be one of the best project teams I have ever worked with.

In mid 2000 Koji Sekimizu replaced Oleg Khalimanov as Director of the IMO Marine Environment Division and quickly joined this partnership. As is now well known, the programme has established itself in six pilot countries, has begun implementing its ambitious work plan and has even undertaken additional activities like convening the International Ballast Water Treatment R&D Symposium in March 2001.

The dynamic between the various representatives is, perhaps, most apparent at the programme's Global Task Force meetings. Here the representatives of IMO have moved beyond their executing agency role to suggest strategic initiatives and partnerships. The representatives of governments have moved beyond mere national interests to an appreciation of the collective output achievable from the programme. The representatives of industry have taken a posture of positive engagement in the process. Finally, the representatives of funding agencies have moved beyond mere financial approval and monitoring to constructive engagement as well. Each representative has remained true to his or her constituency, but has also been willing to enter into a partnership with others to achieve a larger goal.

The final result of this collective effort is for future generations to judge; but there is every indication it will be significant.

Looking back over my years with the United Nations, I am satisfied with a fulfilling career and accomplishments, which hopefully have contributed in making the world a better place. Nevertheless, I value most my close association with friends and colleagues from funding organizations, executing agencies, industry representatives and governments who have moved beyond their normal roles to create the GloBallast programme and work towards making the marine environment more sustainable for us all.

Phil Reynolds

The GloBallast Programme's Development Objectives:

Assisting developing countries to:

- **Reduce the transfer of harmful aquatic organisms in ships' ballast water.**
- **Implement the current IMO ballast water guidelines.**
- **Prepare for the implementation of the IMO ballast water convention when it comes into force.**

How Effective is Effective?

In Ballast Water News No. 2 we featured articles on a number of R&D projects that are looking at alternative ballast water treatment systems. In the last issue (No. 4) we re-visited ballast water treatment with coverage of our R&D symposium and standards workshop held last March. I feel that this is one of the most important current topics relating to ballast water management, and here we explore it again.

In our original articles on treatment systems, we included a statement from the vendors of one system that 'initial test results confirmed that the system's performance is at least equivalent to mid-ocean exchange'. We qualified this statement with an Editor's Note outlining the limitations of using mid-ocean exchange as an evaluation benchmark, due do its wildly variable effectiveness and the significant difficulties of measuring its effectiveness. While it is theoretically possible to achieve up to 99% volumetric exchange of ballast water, the biological effectiveness varies widely. Bio-diversity and abundance can actually increase in ballast tanks after exchange.

This was confirmed at our standards workshop in March, where 70 of the world's leading ballast water treatment experts unanimously concluded:

> '. . . it is not appropriate to use equivalency to ballast water exchange as an effectiveness standard for evaluating and approving/accepting new and future ballast water treatment technologies, as the relationship between volumetric exchange and real biological effectiveness is not defined . . .'

This was again confirmed by IMO's Ballast Water Working Group at MEPC 46 in April, which agreed:

> 'In view of the difficulties of defining the biological efficiency of ballast water exchange, any treatment standard should not be based upon the performance of ballast water exchange.'

The Working Group agreed that clearly defined standards should be set for the performance of ballast water treatment systems. An inter-sessional correspondence group has been given this task and will report to MEPC 47 in March 2001. The group is using the outcomes of the GloBallast standards workshop as a starting point.

The current lack of performance standards, and the inappropriateness of using ballast exchange as an evaluation benchmark, may create a dilemma for some jurisdictions where regulations require certain vessels to undertake ballast water exchange or some other treatment that is *equivalent to or better than it*. This is a classic case of legislation being out of step with technology and science. Regulators may be forced to evaluate and approve alternative systems against an indefinable benchmark and without the appropriate knowledge base, criteria and procedures.

Vendors might exploit this vacuum. For example the commercial advertising that we have reviewed for one system goes beyond claiming that the system is 'at least equivalent' to mid-ocean exchange, to state that it is 'more effective' than exchange! It also claims that secondary treatment 'ensures that ALL organisms are killed'.

Given the conclusions of the world's leading ballast water treatment experts and the IMO Ballast Water Working Group on these matters, we became extremely interested as to how this system was evaluated against ballast exchange. We have attempted to substantiate these marketing claims. The only data we have been able to assess indicates that the system may be partially effective against some organisms. We have been unable to substantiate the vendor's larger claims.

Governments and ship designers, builders and owners should be extremely cautious when evaluating new, alternative ballast water treatment systems. There is a danger that shipping will invest in installing systems that may be of limited usefulness in terms of actually killing organisms, and which might become redundant when IMO agrees an international standard for such systems.

While the vital efforts of the private sector to find a solution to this problem should be applauded and fully supported, and while shipping companies should be strongly encouraged to fit and test alternative systems in real-life operational situations, as an essential part of the R&D effort, it must be made clear that until these systems are proven effective and approved by a relevant jurisdiction, they are experimental only.

An experimental treatment system

Until international standards and procedures for the evaluation and approval of new ballast water treatment systems are agreed and implemented, any shipping company fitting or adopting alternative systems should be fully cognizant of these issues.

The industry would do well to work towards the rapid adoption of the new international ballast water convention by IMO member countries, so as to provide a global 'level playing field' and to remove these elements of uncertainty.

SR

~~~ NEWSFLASH ~~~

1st International Ballast Technology Investment Fair

Chicago 20-21 September 2001

www.nemw.org/fair_about.htm

Caspian Countries Move on Marine Invader

From 23 to 26 April 2001 the Caspian Environment Programme (CEP), a sister programme to GloBallast under the GEF International Waters Portfolio, convened a regional workshop on the occurrence of the introduced comb jellyfish Mnemiopsis leidyi in the Caspian Sea. The workshop was held in Baku, Azerbaijan, where the CEP Secretariat is located.

Mnemiopsis leidyi

Native to American waters, *Mnemiopsis* was first recorded in the Black Sea in 1982, introduced via ships' ballast water.

It feeds by actively hunting zooplankton and exhibits massive fluctuations in population density in response to environmental conditions.

It is a superfluous feeder, consuming up to ten times its own weight per day and regurgitating excess ingested food (Kremer 1979). The reproductive success of *Mnemiopsis* is facilitated by the fact that it is a self-fertilising, simultaneous hermaphrodite.

By 1988 the jellyfish reached an estimated total biomass throughout the Black Sea of 1.109 tonnes wet weight, greater than the world's total annual fish landings (Sorokin 2001). It is believed to have contributed substantially to the near collapse of commercial fisheries in the Black Sea through reduction of plankton resources. The severe economic and ecological impacts of this invader provide one of the starkest case studies of the potential negative effects of ballast water introductions.

Its invasion of the Black Sea raised concerns that it would also spread via ballast water to the Caspian Sea. There is significant shipping between the two Seas, via the Volga-Don River/Canal system. In particular, substantial quantities of oil are exported from the Caspian region to Black Sea ports. These tankers return to the Caspian full of ballast water.

In 1996, Turkmeni fishermen began reporting 'strange jellyfish' in their nets and in 1999 the presence of *Mnemiopsis* in the Caspian Sea was confirmed by scientific survey. By the summer of 2000 it was recorded at densities of up to 100 individuals per m^2. Less than one year after its initial siting, the comb jelly effectively occurred over most of the Caspian Sea. A major population explosion analogous to the previous catastrophe in the Black Sea is now predicted (Ivanov et al 2000). Implications for the ecology and economy of the Caspian and its five littoral States (Azerbaijan, Iran, Kazakstan, Russia and Turkmenistan) may be disastrous.

Being land-locked and isolated for much of its five million year existence, the Caspian has evolved an aquatic biota with 42% endemism (species that are unique and found nowhere else), with some faunal groups approaching a staggering 100% endemism (Dumont 2000). This makes it an extremely important and special system in terms of global biodiversity.

In addition, the Caspian littoral States rely heavily on the sea for fisheries production. A significant proportion of the world's highest quality Caviar comes from the region, and Sturgeon stocks are bordering on collapse due to unsustainable exploitation. Marine-based industries, including oil and gas production, are the mainstays of some regional economies and hold significant prospects for future prosperity.

The Caspian ecosystem is already highly stressed by development, pollution and overexploitation. A massive invasion by a species such as *Mnemiopsis* could bring the system to ecological collapse.

The workshop convened by CEP sought to develop an emergency plan to combat this threat. Experts and officials attended from all of the Caspian countries, the European Union, the USA, the UN Food and Agriculture Organization and other bodies. Given that oil exports account for a significant proportion of ballast water imports, it was pleasing that the oil industry also attended and offered support for an action plan developed by the workshop.

The GloBallast PCU was honoured to be invited and I had the pleasure and challenge of chairing some of the sessions and discussing options for preventing further introductions. Given its land-locked state, the Caspian presents an excellent opportunity to effectively address this problem. Navigational access is by a single point only, the Volga/Don system. It would be conceptually simple to establish a quarantine point and require all vessels entering the Caspian in ballasted condition to discharge to shore-based treatment facilities and/or exchange 'foreign' seawater with Don River fresh water. CEP is exploring this option.

The Baku workshop developed an action plan in response to the current *Mnemiopsis* invasion. GloBallast stands ready to assist with those aspects relating to ballast water management. One of the GloBallast pilot countries, the Islamic Republic of Iran, has a significant Caspian coastline and may share its progress under the programme with its neighbours.

CEP web site: www.caspianenvironment.org

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China Tackles Problem at Source

Perhaps understandably, the countries to first take action on the problem of marine bio-invasions through ballast water were those that receive large quantities of ballast and have experienced the worst invasions.

Unfortunately, this has led to a somewhat skewed approach in the management response, with an overwhelming focus on discharges at destination ports, and little effort on addressing the source of the problem at uptake ports.

Under the GloBallast programme, the People's Republic of China has developed a specific activity that will hopefully begin to reverse this trend, and see both ballast water exporting and importing nations sharing the management burden more equitably.

In the Bohai Sea, south and west of the GloBallast demonstration site at Dalian, blooms of toxic algae occur periodically, under certain environmental conditions. These 'red tides' are believed to be 'fueled' by high levels of pollution from the surrounding landmasses.

Impacts can be severe, especially when important shellfish resources and aquaculture facilities are threatened with contamination by the toxic algae. Contaminated shellfish can cause severe illness and even death when consumed by humans. Toxic algae are readily transported in ballast water.

A 'red tide' of toxic algae

Under the IMO guidelines (A.868(20)), Port States are supposed to collect and communicate information on outbreaks or infestations of harmful aquatic organisms that may pose a risk if taken up in ballast water.

Under the Chinese plan, GloBallast funding and Chinese resources are being used to develop and implement a comprehensive red-tide monitoring and communication system, for alerting ships' Captains to areas to be avoided when taking on ballast. The Chinese Red-Tide Monitoring and Information System will cater for international shipping and use existing maritime communication systems (NAVTEX).

The system will be coordinated by the Liaoning Maritime Safety Administration (MSA). Planning is now well underway.

China is to be commended for acting to prevent harmful algae from being exported from its seas in ships' ballast water, thus helping to protect the marine environments of its trading partners.

IMO Guidelines Translated

The IMO *Guidelines for the control and management of ships' ballast water to minimize the transfer of harmful aquatic organisms and pathogens* A.868(20), have been translated into Chinese and Portuguese by the Chinese Maritime Safety Administration and the Brasilian Directorate of Ports and Coasts respectively, as part of their larger contributions to the GloBallast programme.

The implementation of the IMO guidelines at the national and regional levels is one of the major objectives of the programme. Their availability in these two important languages significantly improves the scope for their successful implementation in these countries and other areas where these languages are used.

New Training Video Available

Videotel Productions, a UK-based producer of maritime training packages, has developed a new training video on Ballast Water Management, with technical support from the GloBallast programme.

The 23 minute video is aimed at ships' crews and explains the ballast water issue, the international response and management options. In particular, it focuses on the IMO voluntary guidelines and ballast exchange at sea.

The video is supported by a handy booklet with explanatory notes, reference information and a useful set of assessment questions. It is currently available only in English. It can be purchased from Videotel: www.videotel.co.uk

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Legal Project Underway

A key component of the GloBallast programme, the Legislative Review Project, is now fully underway with a team of locally based legal experts beginning their research work in the six GloBallast pilot countries.

The Legislative Review entered its first phase in February with the engagement of the World Maritime University (WMU) and myself as the Lead Legal Consultant and Coordinator for the Project.

The second phase, now completed, was the selection of legal experts in each country. These consultants will carry out extensive research to develop a comprehensive plan for the legal changes needed to effectively implement the IMO *Guidelines for the Control and management of ships ballast water to minimize the transfer of harmful aquatic organisms and pathogens* and to lay a foundation for rapid implementation of the IMO ballast water convention, in each country.

The project team will meet at WMU for a workshop in Autumn 2001 to present their findings. During the workshop the team will draw on their experiences in the six pilot countries as well as practices in other countries. The report will contain recommended "best legal implementation practices" and model legislation that can be easily used by other countries to implement the *Guidelines* and, later, the proposed IMO convention.

The Legislative Review Project is important to the success of the GloBallast programme for a number of reasons and serves several complementary purposes.

Under the *United Nations Convention on the Law of the Sea* (1982) States that that are legally bound by it (135 as of June 2001) have an international legal obligation to take steps to prevent the spread of alien species. This international legal obligation is also mentioned in Agenda 21 and included in the Convention on Biological Diversity, which is now legally binding on 180 States. The proposed IMO *Convention for the Control and Management of Ships' Ballast Water and Sediments* and the IMO *Guidelines* are part of States' international activity to fulfil their responsibilities to protect biodiversity and the marine environment in their own and other countries. This means that one broader objective of the Legislative Review Project is to assist the six pilot countries to fulfil their international obligations.

In order to provide the legal authority, and, often, the budget and personnel, necessary for national ballast water management arrangements, countries need to develop their laws to deal with the problem.

Laws are needed to authorize administrative actions, such as, for example, requiring ships entering ports to file ballast water reporting forms or requiring ships to undertake certain ballast water management actions. Laws are also needed to authorise vessel inspections, sampling and any actions taken in the event of failure by a ship to comply with port instructions.

Countries that are also Flag States have an international responsibility to ensure that the ships they control comply with national requirements and have on board personnel trained to safely and properly implement the ballast water management plan for that ship. In the case of countries that supply seafarers for international shipping crew members must trained to comply with ballast water management procedures. This means that there must be national laws in place on these matters.

Finally, all countries will need to develop laws to deal with questions of liability and emergency response and containment activities in the event of invasive species colonization or pathogen release.

These are simply a few examples of the areas where regulations and laws must be developed in each country to ensure that the *Guidelines* and, later, the Convention are properly and effectively implemented.

Another important aspect of the Legislative Review Project is that the six pilot countries (and all other countries in the world) have differing legal and administrative systems. One of the difficulties currently confronting the international shipping industry is that a number of countries have already developed laws to address the problem of invasive marine species. Some have done so in conformity with the voluntary *Guidelines* whilst others have not.

Aside from some internationally agreed upon limitations, all States are entitled and indeed, as noted earlier, obliged to take action to protect their marine ecosystems. However, a common interest amongst all countries that take part in international seaborne trade is that vessel movement should be as efficient, expeditious, safe and ecologically secure as possible. If each port in the world has different requirements and standards, it will defeat this global common interest.

The IMO *Guidelines* reflect a consensus reached in 1997 amongst the IMO members. The IMO Convention that is now being developed is also building consensus amongst members and other stakeholders as to the best course. The final report of the Legislative Review Project, although not formally affiliated with the Convention negotiations, will undoubtedly prove valuable to the IMO member States in their deliberations.

Finally, the Legislative Review Project has been specifically designed to ensure further raising of awareness and local capacity. The use of local legal experts helps to ensure that any solutions work within and respect the legal culture in each country. Through their involvement in the Project the in-country legal consultants will further develop their expertise in this issue. They will then be able to provide on going locally based support and advice for their governments and administrations and will help to raise awareness of the issue in their country.

Dr. Moira McConnell

Dr. McConnell, a Professor in the Marine Environmental Law Programme at Dalhousie University in Canada is on secondment to WMU, teaching in the marine environmental protection, integrated management and law of the sea fields.

Letter to the Editor

Dear Sir

I read with interest your comments on 'Unilateral Actions Surge Ahead' in the third issue of Ballast Water News.

I agree that it may be of concern that a number of States and individual port authorities around the world are taking unilateral action and implementing their own regulatory regimes for ballast water management.

As you mention, Australia has been a leading player in driving the ballast water issue through IMO for many years. This role has been strongly supported by industry in Australia; it is not only a Government initiative.

Australia previously maintained that unilateral action was to be avoided. However, a State or a port cannot stand still indefinitely whilst waiting for the international community to act decisively.

There is a collective responsibility to protect our marine environment. To delay the implementation of management systems whilst awaiting international agreement, can only be taken so far without those responsible being the subject of domestic criticism as to a lack of response to a serious issue.

Obviously, continuing delays in developing an international legal instrument have not been in the interests of Australia as a very significant recipient of ballast water. In view of the large amount of work undertaken within Australia on ballast water management in recent years, it was industry (ports, shipping and commodity interests) that in 1999 strongly recommended to Government that Australia should adopt a unilateral approach rather than wait any longer for members of IMO to agree on a multilateral approach.

In making this recommendation we were conscious of the potential effect it would have on shipping. For this reason we encouraged the Australian Government to ensure that the approach taken would be in line with the guidelines that had been adopted by IMO. Industry still supports this decision and we are fully supportive of, and are working closely with, the Australian Government in the implementation of the Australian Ballast Water Management System from 1 July 2001. In fact it has been industry funding that has largely been responsible for development of this system.

If we had to wait for IMO member countries to reach an agreement on a convention we believe that our management system would not be in place and the dangers to our marine environment would have continued to increase.

We consider that, despite the good work that is underway in relation to this matter in IMO, it may still be some time before a convention is adopted and implemented. Whilst these discussions continue we believe that other States and ports may adopt a unilateral approach to ballast water management, as they also believe that they cannot delay further the introduction of measures to protect their marine environment. We can only hope that any such actions before the ballast water convention is finalized closely mirror the existing IMO guidelines.

John Hirst
Executive Director
Association of Australian Ports and Marine Authorities Inc.

Editor's Note
The issues raised by Mr Hirst clearly exemplify the pressing need for IMO member countries, with the support of industry, to agree on the new international ballast water convention as soon a possible

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New Reports Released

The Australian Department of Agriculture, Fisheries and Forestry has released two new reports under is Ballast Water Research Series. Both are by Australian ballast water experts Geoff Rigby and Alan Taylor.

The first, No. 12 in the series, is entitled *Suggested Designs to Facilitate Improved Management and Treatment of Ballast water on New and Existing Ships.*

It describes many practical ways that ship design and construction can be improved. It is essential reading for any ship designer, builder, owner or operator who is serious about reducing the risk of transfers of harmful marine organisms in ballast water.

The second, No. 13 in the series, is entitled *Ballast Water Treatment to Minimise the Risks of Introducing Nonindigenous Marine Organisms into Australian Ports.* This report constitutes a desk-top review of the various potential options for the management and treatment of ballast water, from ballast exchange at sea through to mechanical, physical and chemical treatments. It focuses in particular on technical effectiveness and cost-effectiveness of the different options. It is essential reading for anybody interested in the development of ballast water treatment systems.

These reports can be ordered from www.affa.gov.au

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Have your say!

Please feel free to submit articles or letters to the editor for consideration for publication in **Ballast Water News**
sraaymak@imo.org

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Fax **+44 20 7587 3261** ■ E-mail **eadams@imo.org**
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Progress Report

Activities Undertaken April – June 2001:

- ✓ 2nd International Marine Bio-invasions Conference (New Orleans) attended by GloBallast rep from Brasil.
- ✓ 1st port survey (S Africa) carried out.
- ✓ Further port surveys planned (Brasil, China, India, Iran and Ukraine).
- ✓ MEPC 46 attended/supported.
- ✓ Mission Undertaken to Azerbaijan – links with Caspian Environment Programme developed.
- ✓ Baltic/Nordic Invasive Species Workshop attended.
- ✓ Planning for Baltic ballast water initiative commenced.
- ✓ Legislation review project proceeding.
- ✓ Train-X modules project commenced.
- ✓ Compliance monitoring & enforcement project commenced.
- ✓ Lecture provided to Plymouth University MSc course.
- ✓ Development of Regional Ballast Water Management Strategy for the Black Sea commenced.
- ✓ R&D Symposium Proceedings prepared.
- ✓ IMO Guidelines translated to Chinese by China MSA.
- ✓ Notice issued by Indian Directorate General of Shipping for shipping industry to implement IMO Guidelines.
- ✓ Temporary admin support recruited.
- ✓ Awareness materials reprinted.
- ✓ GloBallast 'trophy' presented to WMU students.
- ✓ 5th issue of Ballast Water News produced.

Activities Planned July – September 2001:

- Award risk assessment consultancy.
- Commence additionnel port surveys.
- Publish R&D Symposium Proceedings.
- Publish 1st case studies (Brasil, S Africa, Ukraine).
- Update web site.
- Review/consolidate information clearing house function.
- Review and evaluate US West Coast Ballast Outreach Project for US Sea Grant programme.
- Undertake mission to Estonia re. Baltic ballast water initiative.
- Attend Ballast Water and Waste Water Conference, Bremerhaven, Germany.
- Attend 1st International Ballast Technology Investment Fair (Chicago).
- Publish articles in PEMSEA Tropical Coasts journal and Shippingworld/Shipbuilder magazine.
- Advertise for Principal Administrative Assistant position.
- Plan legal workshop at WMU.
- Progress development of ballast water Train-X packages.
- Commence strategic planning for GloBallast Phase II.
- Produce 6th issue of Ballast Water News.

Photo credit: CSIRO

More Information?

Programme Coordination Unit
Global Ballast Water Management Programme
International Maritime Organization
4 Albert Embankment
London SE1 7SR United Kingdom

Telephone : **+44 (0)20 7587 3247 or 3251**
Fax : **+44 (0)20 7587 3261**
Email : **dpughiuc@imo.org** *or* **sraaymak@imo.org**
Web : **http://globallast.imo.org**

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