



MINUTES

GENERAL ASSEMBLY OF MEMBERS INTERNATIONAL CADMIUM ASSOCIATION Thursday, October 16, 2003 – 2:00 PM (1400 Hours)

Café Royal – Lonsdale Room
68 Regent Street
London W1R 6EL, UNITED KINGDOM

CALL TO ORDER

The General Assembly of Members of the International Cadmium Association was called to order at 2:02 PM by its Chairman, Marc von Schwerin of Noranda Inc. The following persons were in attendance or were represented by their Proxy:

REPRESENTATIVE

Graham White
Kenneth L. Money (by teleconference)
Norman W. Gibson
Michael Hughes
Jon G. Helliwell
Marc von Schwerin
Sandra Kempers
Robert Eloy
Jacques Migniot
Jean-Louis Polgaire

MEMBERS' PROXIES

Michael Ball
Timothy G. Pugh
Siegfried K. Osswald
Claudine Lecomte
Mitsuyoshi Iwasaka
Betsy Kraft-Liebermann
Jeffrey S. Mamarella
Joanne Marozza
Charles C. Monahan
Norman England
Mitsunori Takao
Yves Dubois

MEMBER COMPANY

Consider Metal Marketing, Inc.
INMETCO
James M. Brown Ltd.
James M. Brown Ltd.
Johnson Matthey Colours Ltd.
Noranda Inc.
Outokumpu Zinc Commercial
SAFT
S.L.M.C.
S.L.M.C.

MEMBER COMPANY

Acme Electric Corporation
Black & Decker Corporation
Ferro GmbH
Floridienne Chimie S.A.
Japan Mining Industry Association
Kraft Chemical Company
Millennium Specialty Chemicals
National Association of Metal Finishers
Panasonic Industrial Company
Portable Rechargeable Battery Association
Sanyo Electric Co., Ltd.
Umicore S.A.

GUESTS AND STAFF

Anne Leonard
Edouard Gervais
Murray Cook
Frank Van Assche
Michael N. G. Taylor
Hugh Morrow

ORGANIZATION

Pasminco Limited
International Zinc Association
International Zinc Association
International Zinc Association-Europe
International Cadmium Association
International Cadmium Association

The Chairman circulated an attendance roster for each attendee to sign, and each attendee introduced herself/himself and her/his affiliation. Hugh Morrow was appointed as the Secretary Pro-Tempore for the General Assembly of Members. The Chairman asked if a quorum of Members was present or represented by Proxy for the transaction of business. Mr. Morrow responded that 20 of the association's 32 voting representatives were present in person or were represented by Proxy, and thus a quorum was established for the transaction of business.

APPROVAL OF THE MINUTES OF APRIL 8, 2003 GENERAL ASSEMBLY

The Chairman noted that the Minutes of the April 8, 2003 General Assembly of Members, held in Research Triangle Park, North Carolina, USA, had been distributed to the membership for review and comment in June 2003. Since that time, no additions or corrections to the Minutes had been received. Mr. von Schwerin asked if there were any additions or corrections to these Minutes as circulated. **There being no additions or corrections, and upon motion duly made by Jon Helliwell, seconded by Norman Gibson, and approved by the General Assembly, the Minutes of the April 8, 2003 General Assembly of Members were approved as submitted.**

MEMBERSHIP REPORT

Hugh Morrow reviewed changes in membership and members' status since the last General Assembly of Members held on April 8, 2003 in Research Triangle Park, North Carolina, USA. His report is attached to these Minutes as Annex I. No new members have joined the association since April 2003. Ferro GmbH of Germany has resigned its membership citing changes in its market emphasis strategy. Mr. Morrow also clarified the status of the European Chemicals Industry Federation (CEFIC) which had resigned its membership in December 2000 and had not been active in ICdA affairs over the past two years.

FINANCIAL REPORT

Michael Taylor reviewed the association's financial report for the calendar year 2002 as well as results for the First Half 2003. The Financial Report for 2002 is attached to these Minutes as Annex II while the Financial Report for the First Half 2003 is attached as Annex III. The 2002 expenditures for both the European and North American operations were very close to budgeted amounts with the single exception of an unbudgeted amount of \$5,000 contributed, with the Chairman's approval, to the Ad Hoc Metals Coalition in North America to help combat the EPA designation of all nonferrous metals as persistent, bioaccumulative and toxic (PBT) chemicals.

Figures for the first six months of 2003 also indicate that expenses are very close to those budgeted for this period, especially considering that certain expenses for the year tend to be paid early in the year rather than later. Mr. Taylor estimated that, given the present rates of expenditure, income yet to be received, and the present surplus in ICdA's bank account, the association would have a carryover of approximately \$80,000 at the end of 2003.

UPDATE ON CADMIUM REGULATORY AFFAIRS

European Union Regulatory Issues – Michael Taylor presented an overview on European Community regulatory issues, a copy of which is attached to these Minutes as Annex IV. Dr. Frank Van Assche of the International Zinc Association – Europe followed with a detailed presentation on the present status of the European Union's risk assessment on cadmium and cadmium oxide, the Water Framework Directive, the Groundwater Directive, and the Air Quality Directive. His presentation is attached to these Minutes as Annex V.

The final draft of the cadmium / cadmium oxide risk assessment has been completed by Belgium, the lead country serving as Rapporteur. This final draft will now be submitted to the EU's Scientific Committee on Toxicity, Ecotoxicity and the Environment (SCTEE) and subsequently to the OECD to review the soundness of the science of the risk assessment. At the same time, the cadmium industry has established a peer review panel of leading cadmium experts to also review the science of the risk assessment since many feel that the present draft has been compromised and is largely a "political" rather than a scientific risk assessment.

The Research Policy Analysis (RPA) Ltd. report on cadmium pigments, stabilizers and coatings, originally placed on the European Commission's website in 2001, has now been withdrawn because of strong industry objections to many misinterpretations, misrepresentations and inaccurate data contained in the first report. It has been replaced with the version rewritten by the cadmium industry. Hugh Morrow mentioned that the New York Academy of Sciences had relied heavily on RPA's 2001 report in their assessment of cadmium in the New York/New Jersey harbor, and had refused to remove these references even though the 2001 RPA report was removed from the European Commission's website.

Proposals for a New Chemicals Policy (NCP), often designated as REACH (Registration, Evaluation, and Authorization of Chemicals), are now in interservice consultation within the European Commission, and is due to be forwarded to the European Parliament by the end of October. Prime Minister Blair of the United Kingdom, President Chirac of France, and Chancellor Schroeder of Germany have filed a joint letter with the Commission indicating that a new chemicals policy is needed but that the present proposal is too draconian and will have serious trade and competitiveness implications. Members were encouraged to have their companies and associations write EC Trade Commissioner Pascal Lamy to especially emphasize the enormous trade ramifications of the proposed REACH system.

A new version of the proposed revision to the Battery Directive has been issued by DG Environment and is now in interservice consultation with the other departments. **The present draft does not contain a ban on nickel-cadmium batteries, but does maintain high mandatory collection and recycling rates for NiCd batteries.** However, the draft also utilizes the recycling rate calculation formula proposed by the International Cadmium Association, STIBAT in the Netherlands, and *CollectNiCad* which yields reasonably high recycling rate values, and does not penalize industry for batteries in home storage.

North American and International Regulatory Issues – Hugh Morrow presented a summary of North American and International regulatory issues related to cadmium. A copy of his presentation is attached to these Minutes as Annex VI. North American issues covered included the U.S. EPA's Waste Minimization Prioritization List (WMPL), the New York Academy of Sciences Report on Cadmium in the New York / New Jersey Harbor, California's new Hazardous Waste Recycling Act, the National Toxicology Program's evaluation of the toxicology of cadmium telluride, the North American Free Trade Alliance (NAFTA) Commission for Environmental Cooperation (CEC) program on the Sound Management of Chemicals (SMOC), and U.S. Government intervention against the proposed revision of the EU Battery Directive.

International cadmium-specific issues discussed included the increasing activity under the United Nations Economic Commission for Europe (UNECE) Long Range Transboundary Air Pollution (LRTAP) Protocol on Heavy Metals which enters into force on 29 December 2003; the United Nations Environment Program (UNEP) continuing programs and proposals on mercury, lead and cadmium; the UNEP / SETAC (Society for Environmental Toxicology and Chemistry) program on life cycle analyses (LCAs) of metals and metal products; the Organization for Economic Cooperation and Development (OECD) program on the collection and recycling of nickel-cadmium (NiCd) batteries; and the international, particularly trade, implications of the EU's proposed New Chemicals Policy (NCP), also referred to as REACH (Registration, Evaluation, and Authorization of Chemicals).

UPDATE ON CADMIUM MARKET ISSUES

Hugh Morrow presented a brief overview of the present state and trends in the worldwide cadmium market. His presentation is attached to these Minutes as Annex VII. His conclusions were that primary cadmium supply is decreasing but that secondary or recycled cadmium supply is increasing. At the same time, cadmium consumption continues to increase, mainly on the strength of the Chinese and Japanese nickel-cadmium battery markets. Excess cadmium stocks are decreasing and some traditional stocks such as the U.S. Defense Logistics Agency's (DLA) cadmium stockpile are now exhausted. The *Metal Bulletin* cadmium price has been steady for

the past year in the \$0.60 to \$0.85 per pound range depending upon purity level. The world's leading producers of cadmium are Japan, China, Korea, Canada and Mexico while the world's leading first-use consumers are China and Japan. The world's leading consumer NiCd battery producers are Sanyo, BYD, Panasonic and SAFT, while SAFT remains the world's largest industrial NiCd battery producer. It was noted that growth in Third World countries will probably continue to provide future growth in the NiCd battery industry and thus also in the cadmium industry. Mr. Morrow reiterated Mr. Taylor's earlier announcement that the new draft of the proposed revision to the EU Battery Directive did not contain a NiCd battery ban, but added that future freedom from such bans and restrictions would hinge on the continued growth in NiCd battery collection around the world.

UPDATE ON INTERNATIONAL CADMIUM ASSOCIATION'S WEBSITE

Mike Taylor reviewed the status of ICdA's website, www.cadmium.org. His overview is attached to these Minutes as Annex VIII. The ICdA website was created in 1998. The association is not mentioned specifically, but it is funded and maintained by the International Cadmium Association. At the time of its creation, it listed only the then-existing Members of ICdA as producers, recyclers and suppliers of cadmium and cadmium products. In the interval since 1998, a number of companies have gone out of business, resigned from the association or merged with other companies or otherwise changed their identities, so that a series of updates and corrections were necessary and were made in 2003.

Mike Taylor mentioned that the website had enjoyed 150,000 visits in the past two years. However, many of these visits were probably from environmental organizations, and a question was raised as to whether this number represented different visits, repeat visits from individuals, or multiple "hits" during one visit. The question was raised as to whether or not ICdA members should be listed on the website as producers and consumers of cadmium and cadmium products. In the past, some had felt that only ICdA members should be listed, some felt that all cadmium producers and suppliers should be listed, and some felt that none should be listed. **After a substantive discussion, it was moved by Norman Gibson, seconded by Jon Helliwell, and voted by the General Assembly of Members that the names and contact details for all cadmium and cadmium product suppliers and producers should be removed from the website pending further evaluation of the Members preferences.**

The issue was also raised as to whether or not the website should be identified and associated with the International Cadmium Association. The General Assembly decided to take no action at this time on these questions, but the Chairman invited all Members to submit their thoughts on these issues, especially in light of the forthcoming expected review of the direction of future ICdA activities.

DISCUSSION OF PROPOSALS FOR FUTURE ICdA STRUCTURE

Chairman Marc von Schwerin presented the background and development of proposed changes in the structure of the International Cadmium Association in the face of reduced income from cadmium producers over the past several years. Membership income has declined from over \$400,000 in previous years to anticipated 2004 income of approximately \$180,000 compared to expenditure requirements of approximately \$400,000. In view of this situation, meetings and discussions have been held over the past year to develop a plan by which the International Cadmium Association can continue to function and to serve the needs of its Members. One of the first meetings was held in Namur, Belgium in March 2003. The proposals from Namur were subsequently also discussed at the April 8, 2003 General Assembly of Members in Research Triangle Park. Summaries of the discussions held in Namur and Research Triangle Park are contained in the Minutes of the ICdA General Assembly of Members held in Research Triangle on April 8, 2003.

Subsequent to the Namur and Research Triangle Park meetings, Chairman Marc von Schwerin has held discussions with the International Zinc Association (IZA) in an effort to negotiate funding to allow ICdA to operate and carry out its objectives as enunciated at the Namur and Research Triangle Park meetings. IZA has recently indicated that it is ready to offer a \$100,000 contribution to ICdA. While certainly needed by ICdA, this additional amount will not be sufficient to maintain both the North American and European offices with full-time staff levels as in the past. A structure that accommodates the lower membership income by scaling back costs and taking advantage of administrative synergies had been developed in the discussions with IZA. Since most of ICdA's costs are staff-related, the proposed new structure calls for activity levels in Brussels and Washington to be reduced. ICdA would still retain its autonomy while incorporating administrative functions with existing IZA administrative structure in Brussels and allocating funds for outside scientific support on

cadmium issues on an ad hoc basis. The resulting expenditure budget for the association for 2004 would then be in the neighborhood of \$200,000 with the necessity of some additional transition costs. To maximize ICdA capabilities under such a scenario, IZA has offered to furnish part-time staff with regulatory affairs experience to manage the Brussels office. The IZA staff person, Lidia Regoli, also has a formal science background. She would spend 50% of work time on cadmium issues and 50% on zinc issues. The Consultant for North American activities would also operate on a scaled-back level, although transitional requirements in 2004 would require approximately a 70% total effort for 2004 and 50% effort in subsequent years. Mr. von Schwerin indicated that such a revision in the structure of the International Cadmium Association would require the approval of all Members, and a revision of the association's By-Laws. A formal vote in the form of an e-mail ballot would be circulated in the coming weeks as soon as IZA's formal proposal has been received. Mr. von Schwerin would remain in contact with IZA to work out the details for IZA's formal offer. Proposed long term budgets for the association from 2004 through 2007 are shown in Annex IX.

Norman Gibson raised the question of whether or not cadmium producers' contributions would continue in the future or be replaced by the IZA contribution on behalf of all cadmium producers. Mr. von Schwerin indicated that this was essentially a matter for cadmium producers to decide independently.

Edouard Gervais, Executive Director of the International Zinc Association, reiterated the administrative cost savings benefits the proposed system would have for ICdA as well as synergies of operating on issues of importance to both cadmium and zinc. The Brussels General Manager would also be working half time on similar zinc issues with obvious benefits to both metals. Mr. Gervais also mentioned that ICdA could forego its membership in the International Council for Mining and Metals (ICMM) thereby saving approximately \$2,000 because IZA already has such a membership and covers issues there. Additional savings might also be realized since ICdA personnel would not have to attend all ICCM meetings in the future. Such an arrangement would not preclude ICdA personnel from becoming involved in cadmium-specific ICMM activities acting as part of the IZA team.

Jon Helliwell viewed the proposed revised structure as an opportunity to build up the activities and scope of the International Cadmium Association. He stated that the cadmium pigments producer Members as a group were in favor of the concept, and that some of them would be open to paying higher membership dues to increase the associations' level of activity. He suggested that all consumer members may wish to increase assessment rates to ensure an appropriate level of activity. The Chairman thanked Mr. Helliwell for his proposal and suggested that this be given consideration at a future point and once the 2004 Business Plan was further developed. Norman Gibson concurred and suggested that the Board of Directors should meet more often, if not face-to-face, then by teleconference calls to discuss issues of importance and keep more up to date on regulatory developments.

Marc von Schwerin stated that the International Zinc Association would seek to have three Directors on ICdA's Board of Directors to reflect that body's financial commitment and to ensure an appropriate level of engagement from zinc/cadmium producers in the future. They could be nominated either from IZA staff or from IZA Member Companies with a strong interest in cadmium issues. He added that cadmium producers who remained as ICdA Members should be retained on the ICdA's Board of Directors.

The plan, therefore, subject to approval of the ICdA membership, calls for ICdA to adopt the proposed new structure and 2004 budget effective January 1, 2004. At the same time, Hugh Morrow would become a consultant and The Cadmium Council, Inc., which still legally exists under United States law, would be dissolved. A sum of \$15,000 has already been set aside in previous years to cover the costs of the dissolution of The Cadmium Council, Inc. Beginning on May 1, 2004, the IZA staff member, now working for IZA-Europe, would assume the new position as ICdA's General Manager, working approximately 50% of the week on cadmium affairs. Between January 1st and May 1st, Hugh Morrow and Murray Cook of IZA would work to ensure the transition from the existing ICdA structure to the new ICdA structure. IZA had indicated that suitable staff would be available for this position but that the transition might not occur until about May 1st.

The sense of the General Assembly was that the concept outlined above was acceptable to both the International Zinc Association and the International Cadmium Association. However, specifics must now be worked out and a formal proposal must be approved by all ICdA Members. Following approval of the proposed structure, ICdA Members must also approve a Board of Officers and Directors for 2004 and a budget for 2004. These ballots will also be forthcoming in the coming weeks.

ICdA MEMBERSHIP IN ICMM AND COLLECTNICAD

Michael Taylor briefly discussed the International Cadmium Association's memberships in these two organizations. Both involve fees of approximately \$2,000 per year and both are seen as having considerable benefits to the activities of ICdA. However, as discussed above, synergies on ICMM issues could be coordinated with IZA under the proposed new structure of ICdA. Thus, it was agreed that ICdA would continue to maintain its membership in CollectNiCad but that it would terminate its membership in ICMM.

NEXT MEETING DATE

The next General Assembly of Members of the International Cadmium Association is tentatively scheduled to coincide with the IZA / ILZRO meetings at the Carolina Inn in Chapel Hill, North Carolina, USA during the week of April 19-23, 2004. Members will be notified as soon as a specific date for the ICdA meeting has been established. The General Assembly agreed that having the Fall General Assembly of ICdA on the Thursday afternoon of London Metal Exchange (LME) week was preferable to earlier in the week as in previous years.

ADJOURNMENT

There being no further business before the General Assembly of Members and upon motion made by Graham White, seconded by Jon Helliwell, and approved by the meeting, the General Assembly of Members of the International Cadmium Association was adjourned by its Chairman, Marc von Schwerin, at 5:36 PM (17:36 Hours).

Respectfully Submitted,

Hugh Morrow
Secretary, Pro-Tempore



**MEMBERSHIP REPORT
INTERNATIONAL CADMIUM ASSOCIATION
October 16, 2003**

NEW MEMBERS

No new Members have joined the International Cadmium Association since its last General Assembly of Members held on April 8, 2003 in Research Triangle Park, North Carolina.

RESIGNATIONS

Ferro GmbH

Ferro GmbH, a producer of cadmium pigments located in Germany, submitted its letter of resignation from ICdA in June 2003. Ferro has resigned from membership because they plan to move their pigments business away from cadmium pigments in the future. A copy of their letter of resignation is attached to this report for information.

CEFIC

The European Chemical Industry Council (CEFIC) clarified its position with respect to membership in the International Cadmium Association. They had previously submitted their letter of resignation from ICdA on December 22, 2000 through the European Stabilisers Producers Association (ESPA). Their resignation was never previously reported and they have not participated in ICdA activities in 2001, 2002 and 2003.

ICdA Budget+Results 2002

	USD	Budget 2002		Expenses 2002			USD/EUR 1.15
		EUR	USA	Total	EUR	USA	Total
Accounting		5000	6500	11500	6233	8013	14246
Audit fee				0	0		0
Bank charges		1000	200	1200	1123	140	1263
Documentation etc.		3000	0	3000	0		0
Insurance & taxes		250	850	1100	203	316	519
Meetings		7500	10000	17500	4025	9246	13271
Motor Car Expenses		7500	0	7500	8602	0	8602
Office Services		5000	2500	7500	433	2508	2941
Office Supplies		3000	2000	5000	1435	1895	3330
Postage		2000	1000	3000	590	560	1150
Professional fees		0	0	0	3010		3010
Rent & rates		20000	8400	28400	17108	8400	25508
Repairs & Maint.		1500	1000	2500	1558	1051	2609
Salaries/Benefits		110000	143699	253699	129772	144038	273810
Stationery/photocopy		2000	1500	3500	665	1383	2048
Stats		3000	0	3000	0		0
Subscriptions		500	500	1000	0	379	379
Sundries		500	500	1000	0	243	243
Phone/fax		5000	2500	7500	6260	2447	8707
Training		0	0	0	0		0
Travel		20000	15000	35000	15673	14967	30640
Regulatory				0		5000	5000
ICMM Membership				2000			2000
USA Wind down				5000			5000
CNC					2000		2000
Total		196750	196149	399899	196690	200586	406276

ICdA Budget and Results Jan-Jun 2003

USD/EUR 1.15

	Budget			Result		
	EUR	USA	Total	EUR	USA	Total
Accounting	5000	6500	11500	3116	4328	7444
Audit fee			0			0
Bank charges	100	150	250	57	66	123
Documentation etc.	1000	0	1000	0	0	0
Insurance & taxes	1700	850	2550	500	316	816
Meetings	5000	8000	13000	1150	3205	4355
Motor Car Expenses	7500	0	7500	3842	0	3842
Office Services	1000	2000	3000	0	643	643
Office Supplies	2000	1500	3500	400	719	1119
Postage	500	500	1000	282	273	555
Professional fees	0	0	0	0	0	0
Rent & rates	18000	8400	26400	10862	4200	15062
Repairs & Maint.	500	800	1300	1150		1150
Salaries/Benefits	132000	144940	276940	68545	74155	142700
Stationery/photocopy	500	1000	1500	115	86	201
Stats	0	0	0	0	0	0
Subscriptions	0	300	300	0	150	150
Sundries	500	300	800	0		0
Phone/fax	3500	2300	5800	2273	1434	3707
Training	0	0	0	0	0	0
Travel	17000	12000	29000	2562	8947	11509
Regulatory			0			0
Memberships			4000	4600	0	4000
USA Wind down					0	
Total	195800	189540	389340	99454	98522	197376

EU Regulatory Affairs Overview-October 2003

Belgian Risk Assessment "Final Draft" Complete

Submission to SCTEE and OECD

RPA Report Out/Industry Re-write In

Cadmium Industry Parallel Peer Review (drafts complete)

New Chemicals Policy (REACH): Political Leaders Fight Back

New Draft Battery Directive Circulating Among DGs (no Cd "ban")



Outcome of the EU RA on Cd/CdO, and way forward

*Frank Van Assche
International Zinc Association -Europe
168, Avenue de Tervuren, B-1150 Brussels, B*



Content

- Outcome of the Cd/CdO RA
 - Environment
 - Human health
- Further EU RA process, timing
- Other EU directives related to Cd



Conclusions of the EU RA: environment (1)

- **Concl (i): further information requested**
 - Waters with very low hardness (<10 mg CaCO₃/l)
 - Cd bioavailability in sediments
- **Concl (ii): no risk**
 - Local water/sediment CdO producers
 - Most local soil scenarios
 - Number of regional water scenarios e.g. Germany
 - Most regional soil scenarios
 - Secondary poisoning top predators and terrestrial animals



Conclusions of the EU RA: environment (2)

- **Concl (iii): risk**
 - Local water/sediment at 10 production and processing sites (stabilisers, pigments, plating, alloy)
 - Local soil: 3 sites
 - Regional water: cannot be excluded in certain regions
 - Regional soil: some regions e.g. UK
 - Waste water treatment plants: pigments, plating, alloys



Conclusions environment: discussion

- Risk scenarios are result of:
 - High level of conservatism in RA
 - Use of default emission factors, older emission data...
 - But also realistic emission data
 - limited bioavailability correction
- Concl (i)
 - Softwaters: Industry has questioned relevancy of programme ⇒ ?
 - Sediments: AVS correction accepted in Zn RA, Cd case is ready



Conclusions of the EU RA Human health: *workers*

- Concl (i) « on hold » for low dose-related neurobehavioural effects
- Concl (iii): at reported exposure levels, risk (after inhalation), for
 - Acute toxicity, respiratory irritation,
 - kidney & bone repeated dose toxicity
 - Genotoxicity, carcinogenicity, reprotoxicity



Conclusions of the EU RA Human health: *consumers*

- **CdO: No risk**
- **Cd metal:**
 - risk for acute respiratory effects when using Cd containing brazing sticks
 - Risk for dermal exposure from imported Cd containing jewelry



Conclusions of the EU RA Human health: *general population*

- **Concl (i) « on hold »** for low dose-related neurobehavioural effects
- **Concl (iii):**
 - **At the mentioned exposure levels, health risks (kidney & bone (all scenarios except adult non-smokers) and lung (scenario 3) repeated dose toxicity, carcinogenicity/genotoxicity for all scenarios) cannot be excluded upon environmental exposure.**



Conclusions on Health

- **Extreme conservatism/Swedish pressure made risk scenarios unavoidable**
 - Tolerable weekly intake from WHO lowered, no healthy workers effect
 - Swedish lies and other dirty tricks
- **Yet,**
 - **Reported exposure at producing/processing sites is too high**
 - **Emissions from Cd production and processing only contributes 3,8 % to Cd input into environment**



Further EU/OECD process

- **Cd files will be reviewed**
 - **by CSTE (EU review advisory committee)**
 - Process will start end 2003?
 - **Expert opinion for CSTE currently being finalised (human health)**
 - CSTE review end Mid 2004?
 - Concl (i) on softwaters ??
 - **By OECD (1st half 2004)**



Cadmium in the EU: « politically toxic »

- High political pressure on Cd emissions, in spite of proven limited effect on exposure
- Impossible to have objective scientific debate
- Coordinated action can have result: Battery Directive
- RA conclusions require careful follow up with Belgian Rapporteur ⇒ risk management ??
- Industry needs to improve local performance
 - production, processing
 - Worker exposure and emissions (if necessary)



Water Framework Directive (adopted in October 2000)

- Achieve 'good' quality status by 2010
 - Priority Hazardous Substances (PHS): Cd, Hg,...
To undergo measures aimed at the cessation of discharges: « 0 » emissions by 2020!!
 - Metals need to reach « near background » levels
 - Methodology of prioritization of sources and measures on substances is being discussed
- Implementation of river basin management



Groundwater Directive

(New draft proposal received 19 September 2003)

- Good quality status by 2015
- Cd = '0' emissions by 2020 (cfr. WFD)
- Monitoring programmes to begin in 2006
- Clean-up of groundwater at contaminated sites
 - all metals
 - Thresholds for action set at 75% of the current levels
- Economic impact study ongoing



Air Quality Directive

(New draft proposal received 16 July 2003)

- Air quality around industrial sites is an issue
- Cd, As, Ni:
 - no limit value but assessment threshold (5 ng/m³)
 - requires industrial sites to monitor air in surroundings, apply BAT, and inform the public
- Economic evaluation of air quality values: « costs would clearly outweigh the quantifiable benefits »

Regulatory Affairs Report North American and International Activities

**International Cadmium Association
General Assembly of Members**

**Café Royal – Lonsdale Room
68 Regent Street, London W1R 6EL, UK**

October 16, 2003

Major North American Cadmium Issues

-
- **U.S. EPA Waste Minimization Priority List (Lead, Cadmium and Mercury)**
 - **New York Academy of Sciences Cd Report**
 - **California Electronic Waste Recycling Act**
 - **National Toxicology Program on CdTe**
 - **NAFTA CEC SMOC Draft NARAP on Lead**
 - **USA Opposition to EU Battery Directive (Dept. of Commerce, US Trade Represent.)**

U.S. EPA Waste Minimization Priority List

- **Originated as PBT Program on Metals in Late 1990s**
- **Strongly Opposed by Ad Hoc Metals Coalition**
- **Metals Changed to WMPL (Pb,Cd,Hg) in 2002**
- **EPA Metals Action Plan in 2002/2003**
- **Independent Expert White Papers**
 - **Public Meeting October 27-28, 2003**
 - **US and EU Experts to Discuss Issues**
- **Metals Assessment Framework**
 - **Expected First Quarter 2004**
 - **SAB Review Second Quarter 2004**
 - **Final Document Due by End of 2004**
 - **Will Govern Future Regulation of Metals by EPA**

New York Academy of Sciences Cadmium Report

- **Intended to Characterize Cadmium Levels and Mass Flows in the NY/NJ Harbor**
- **Mass Flow Studies: Cd Rapidly Decreasing**
- **Industrial Ecology Report: Emphasizes Cd Products and Ignores Cd Impurities**
- **NiCd Batteries Cited as Major Pollutant**
- **ICdA, PRBA, INMETCO Worked Together to Revise Conclusions and Encourage Battery Collection and Recycling**

California Electronic Waste Recycling Act

- **Approved September 25, 2003**
- **Mandates Industry Collection and Recycling of “Hazardous Electronic Devices”**
- **Limits Hazardous Materials Content (Cd) in Cathode Ray Tubes and Video Screens**
- **Prohibits Electronic Device Being Sold in California If Prohibited Under 2002/95/EC**
- **Effective January 1, 2007 or On or After Effective Date of 2002/95/EC**

Major International Cadmium Issues

- **UNECE LRTAP Heavy Metals**
- **UNEP Heavy Metals Program**
- **UNEP/SETAC LCAs of Metals**
- **OECD NiCd Battery Collection and Recycling Program**
- **EU REACH Chemicals Proposal**

UNECE Heavy Metals Expert Group Work Plan

- **Effectiveness of Reducing Cd, Pb and Hg**
 - Emissions, Modeling, Effects (USA/NL)
- **Review of Other Metals Not in Protocol**
 - Emissions, Modeling, Effects (USA/NL)
- **Techniques for Controlling HM Emissions**
 - BATs, Limit Values (Germany)
- **Product Control & Management Measures**
 - Revising Annexes VI & VII (Sweden/Canada)

UNECE LRTAP Heavy Metals Protocol

- **Ratified by 16 Countries to Date**
- **Enters into Force 29 December 2003**
- **Assessment of HMs Expert Group**
 - EMEP & WGS (Inventories, Monitoring)
 - Working Group on Effects (Crops, Waters)
 - Review of Other Metals (As,Cr,Cu,Ni,Zn)
 - Expert Group Work Plan 2003 – 2005
 - Next Meeting: November 2003, Germany

UNECE Corrosion of Heavy Metals Workshop

- **Munich – May 12-14, 2003**
- **Organized by Sweden & Germany**
- **Emphasis on Pb, Cu, Zn, Fe, Al**
- **Cadmium Regarded as Impurity and Corrosion Contribution Small**
- **Importance of SO₂ Level and Acid Rain on Major Structural Metals**

UNEP Heavy Metals Program

- **Governing Council's 22nd Meeting Nairobi, 3-7 February 2003**
- **Lead Program**
 - **ESM of Lead-Containing Wastes**
 - **Phase Out of Pb in Gasoline and Paints**
- **Mercury Program**
 - **Initiate “Mercury-Action Program”**
- **Future Action Considered on Pb, Cd**
- **Next Meeting – Nairobi – Feb 2005**

UNEP/SETAC Life Cycle Initiative

- **Initiated in 2002**
- **Promotes Sustainable Consumption and Production**
- **Work Groups and Task Forces**
 - **Life Cycle Inventory (LCI)**
 - **Life Cycle Impact Assessment (LCIA)**
 - **Life Cycle Management (LCM)**
- **Importance of LCAs Cd Products**

OECD NiCd Battery Collection & Recycling Program

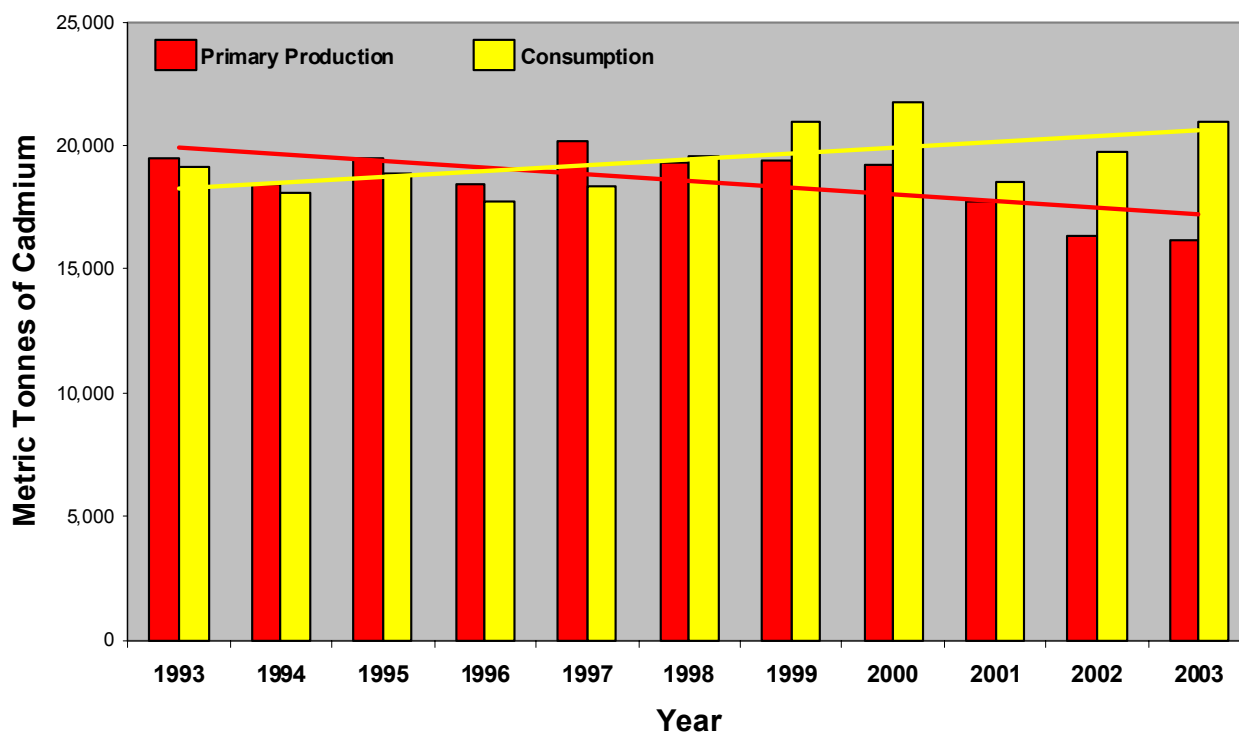
- **OECD Wide Battery Label Rejected by EC But Adoptable by Other OECD Nations**
- **Experiences Document Incorporating Comments from Industry and OECD Nations (Environment Canada and U.S. EPA)**
- **OECD NiCd Recycling Website On-Line**
- **WGWPR May Consider NiCds in ESM**
- **Recycling Rate Definition Group Never Convened But of Critical Importance**

Cadmium Market Report

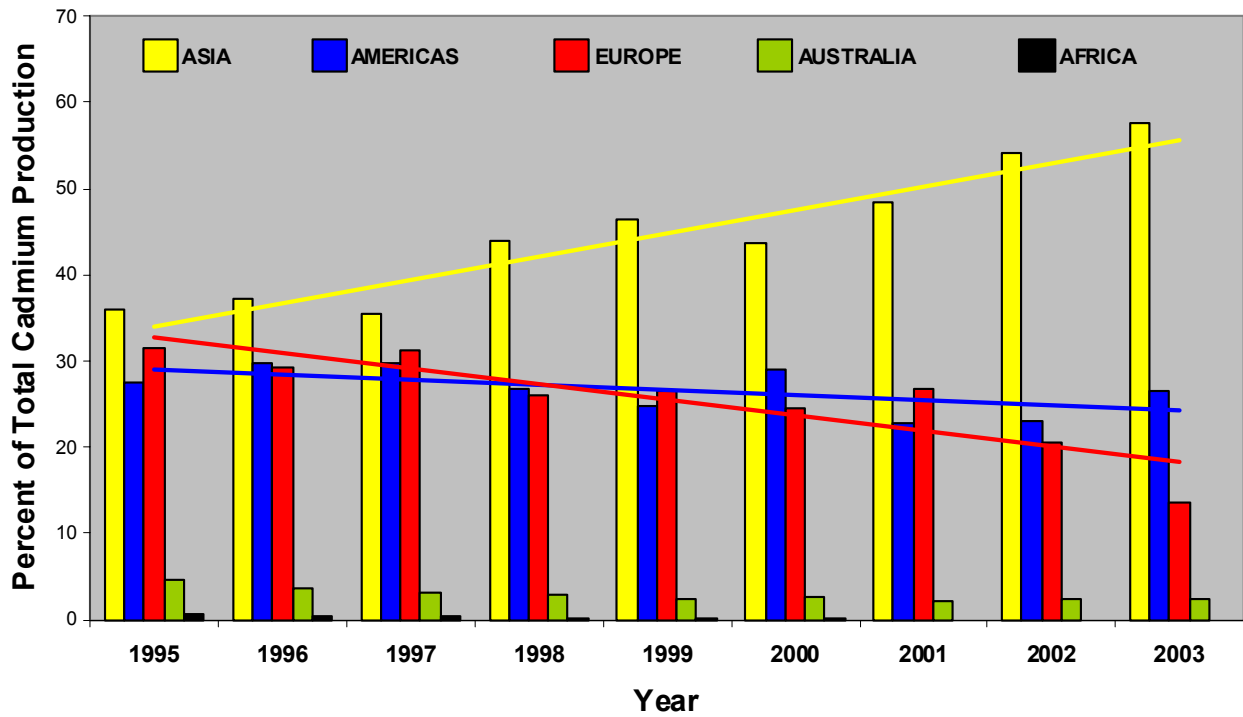
**International Cadmium Association
General Assembly of Members**

**Café Royal – Lonsdale Room
68 Regent Street, London W1R 6EL, UK
October 16, 2003**

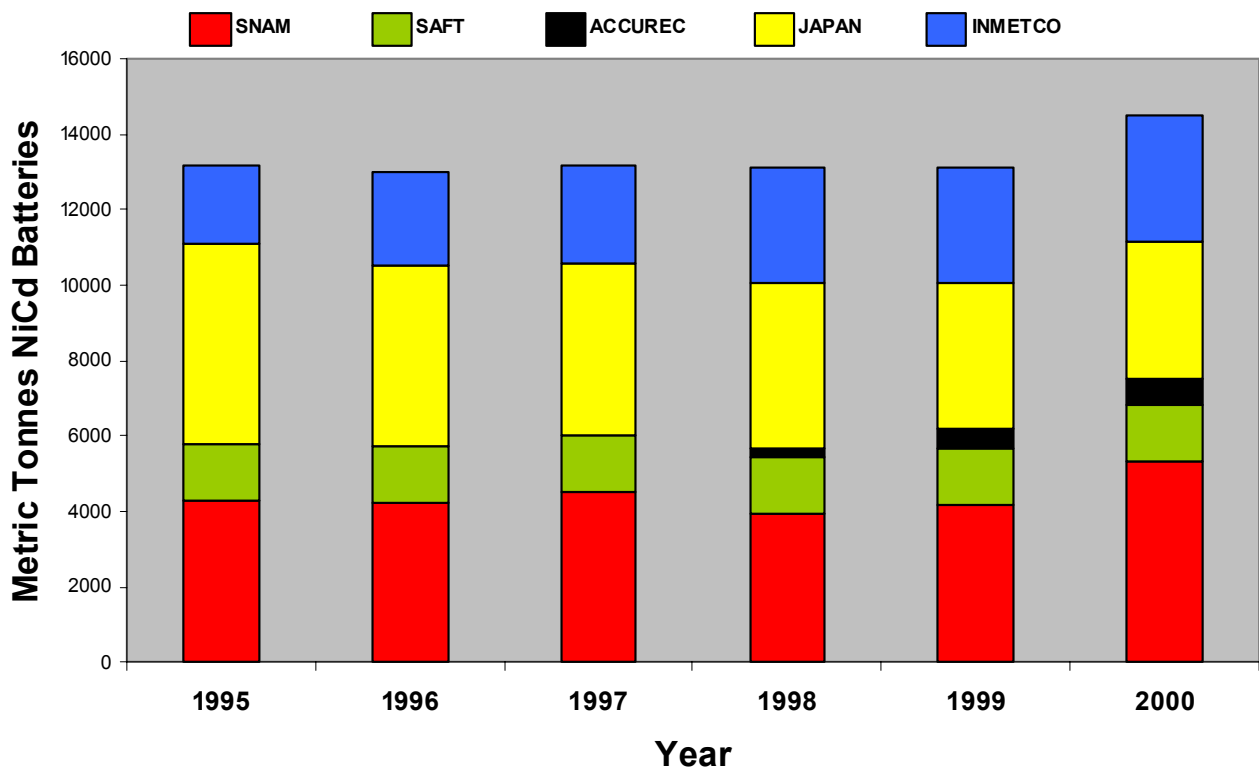
Cadmium Production and Consumption, 1993-2003



Geographical Cadmium Production, 1995-2003



Worldwide NiCd Battery Recycling, 1995 - 2000

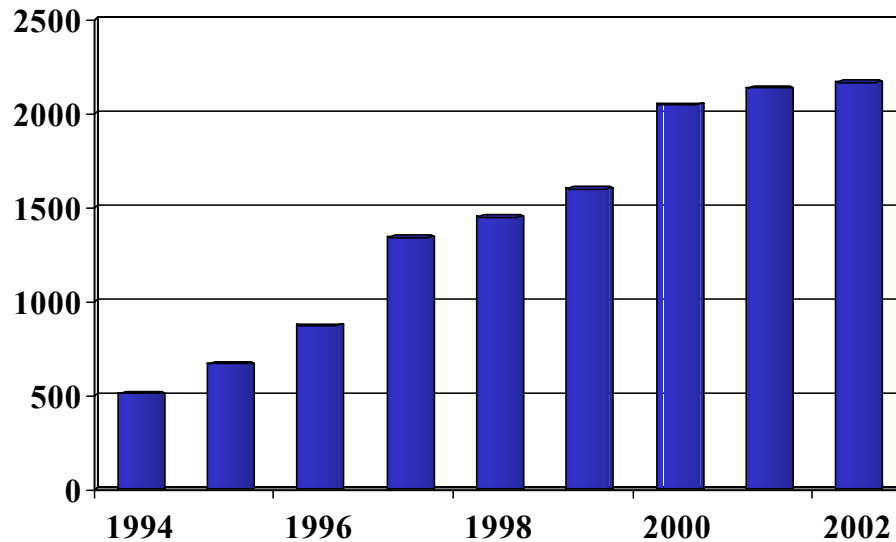




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Sealed/Portable Ni-Cd Batteries

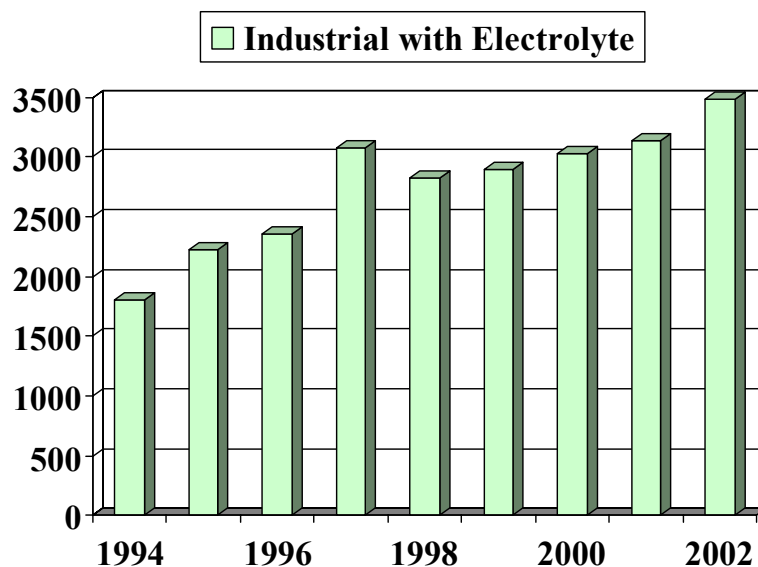
**Spent Portable Ni-Cd Batteries from European Sources
collected separately and processed in Recycling Plants
(15 EU MS + CH + N) - Data in Metric Tonnes per year**



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Industrial Ni-Cd Batteries

**Spent Industrial Ni-Cd Batteries from European Sources
collected separately and processed in Recycling Plants
(15 EU MS + CH + N) - Data in Metric Tonnes per year**





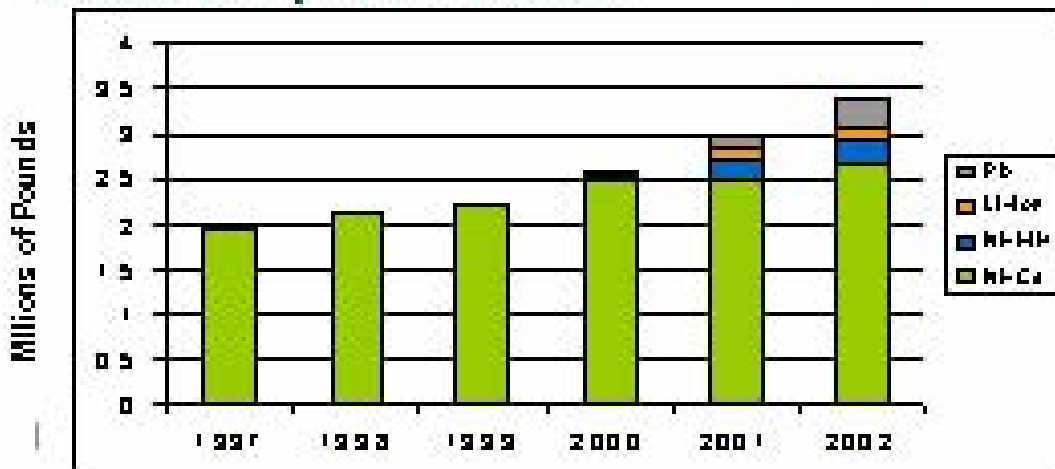
IF IT'S RECHARGEABLE, IT'S RECYCLABLE

WWW.RBRC.ORG

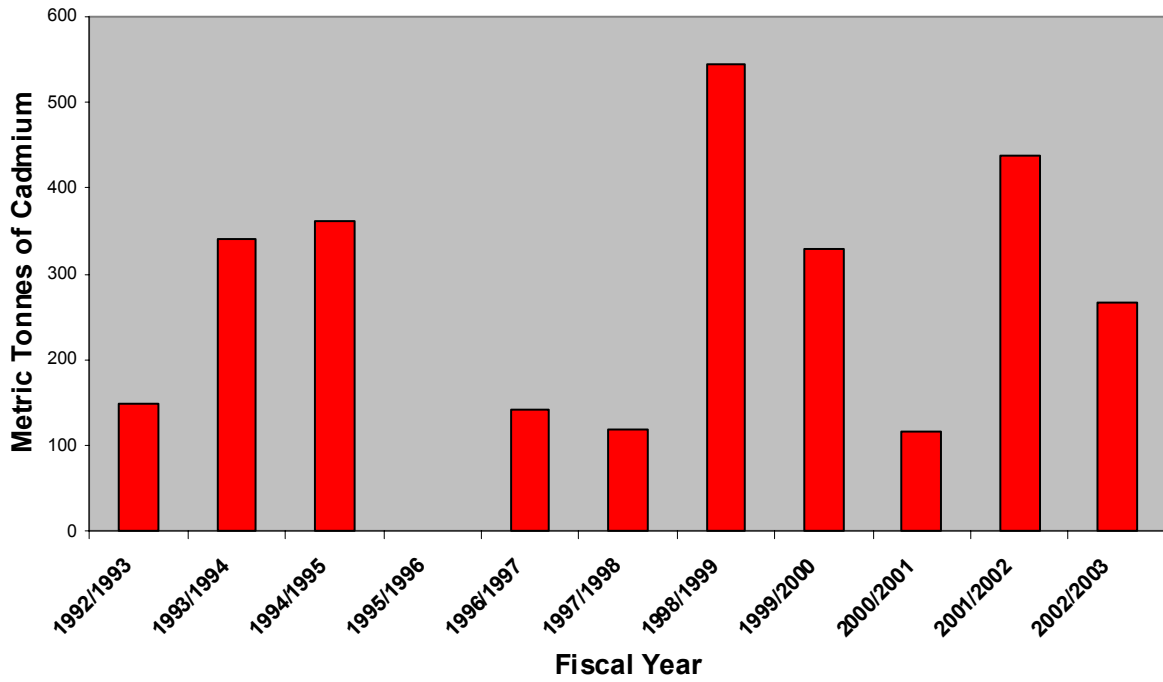
1.800.8.BATTERY

Total Rechargeable Batteries

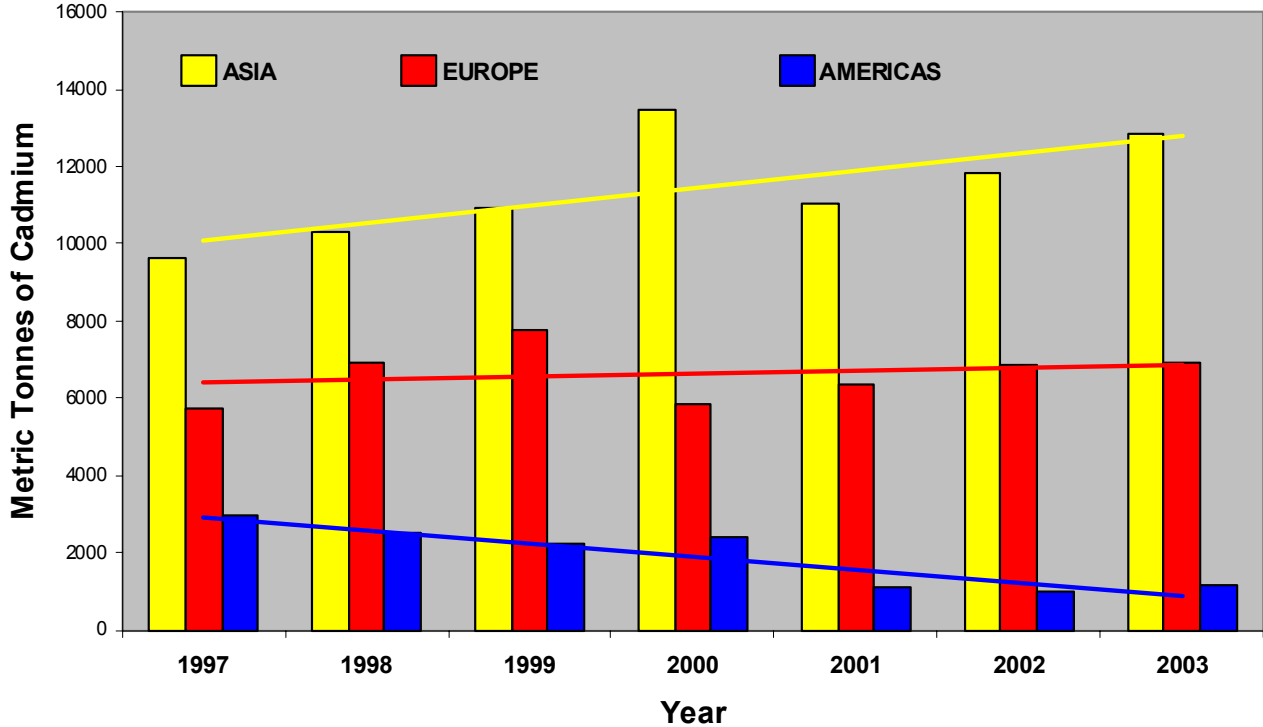
RBRC increased collection of all rechargeable batteries by 12% in 2002.



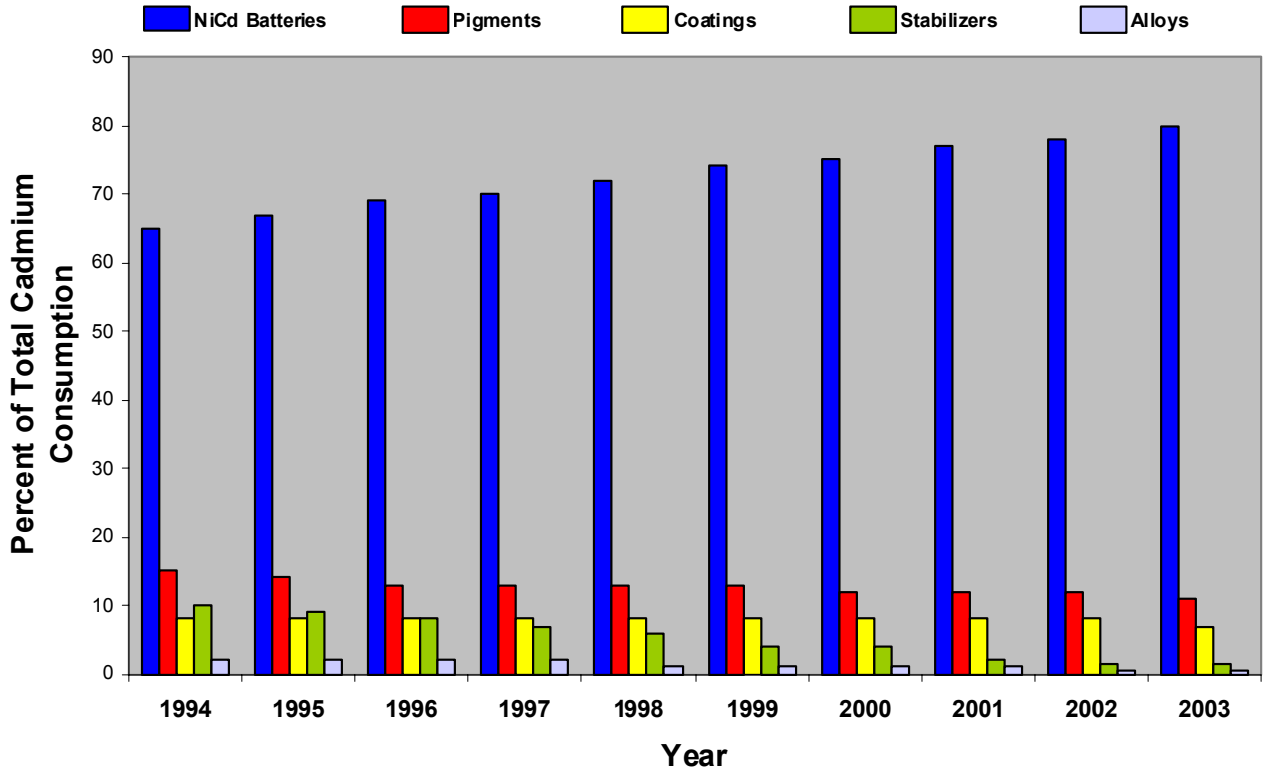
U.S. DLA Cadmium Disposals, 1992 - 2003



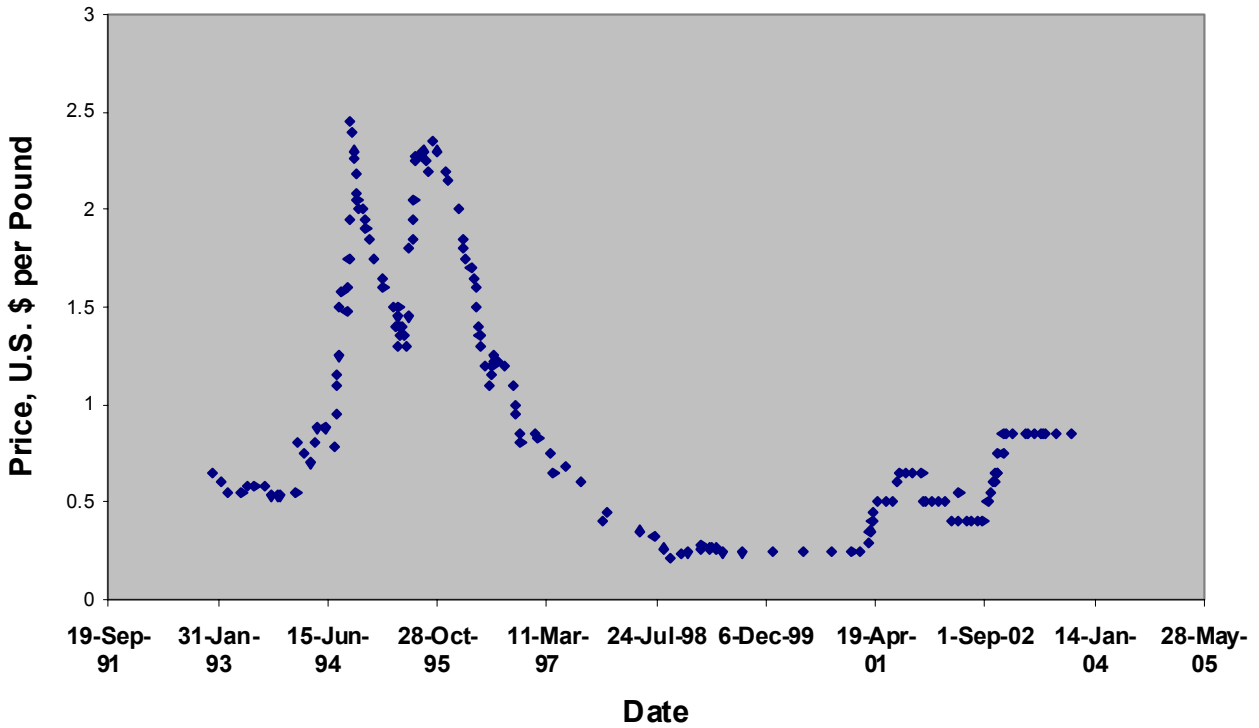
Geographical Cadmium Consumption, 1997 - 2003



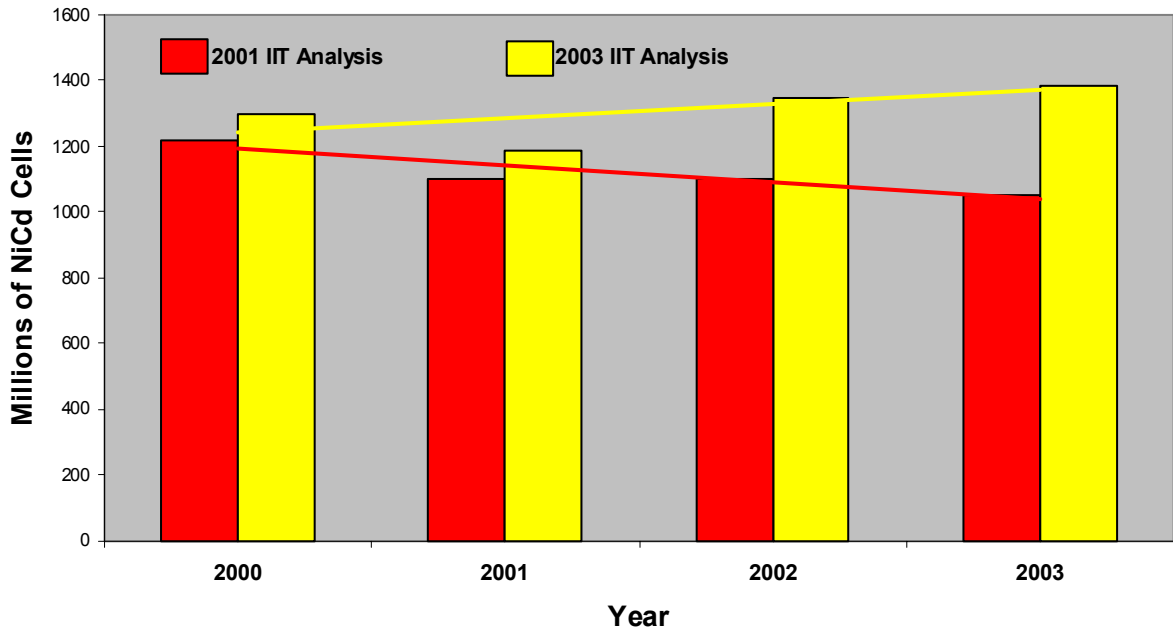
Cadmium Application Patterns, 1994 - 2003



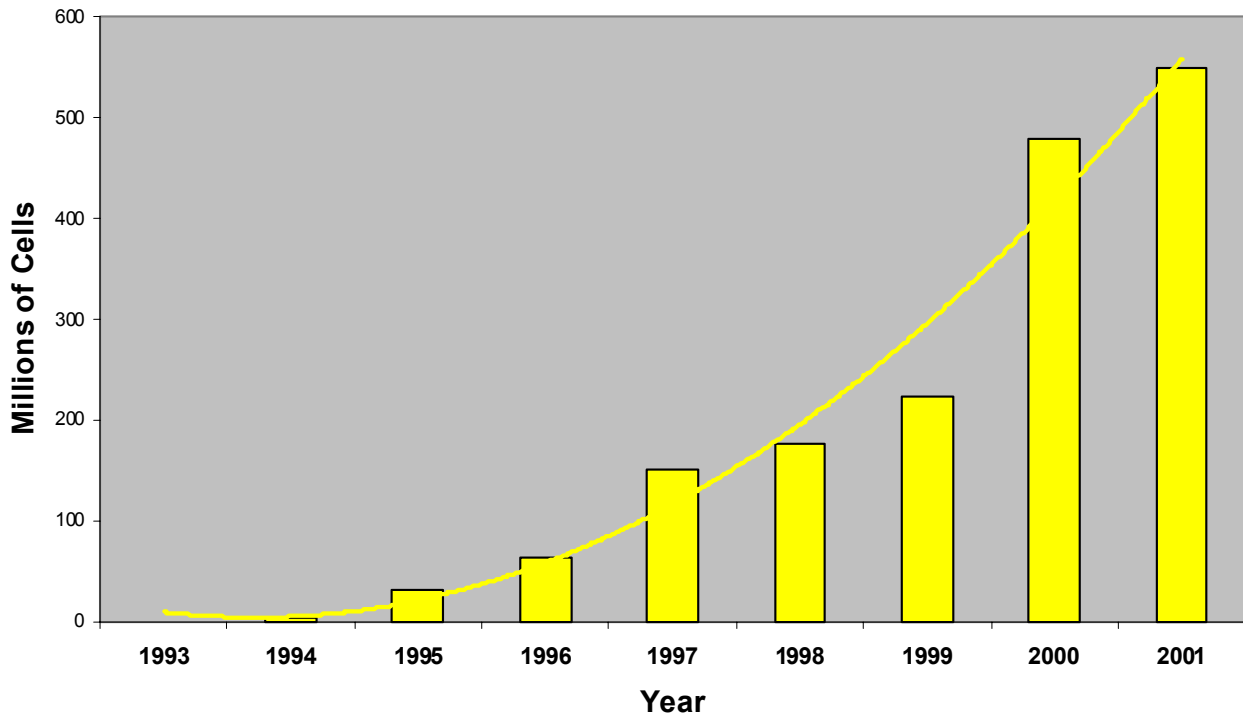
Metal Bulletin 99.99 Cd Price, 1993 - 2003



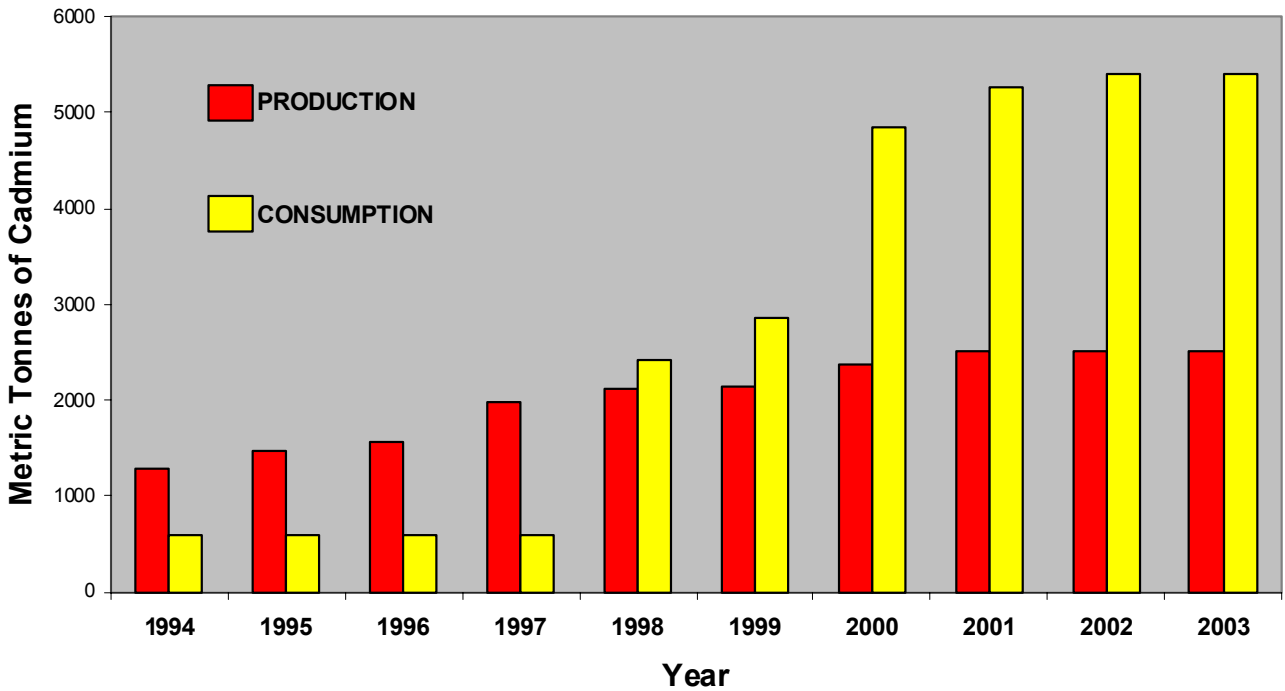
World NiCd Battery Market, 2000 - 2003 Comparison of IIT 2001 and 2003 Analyses



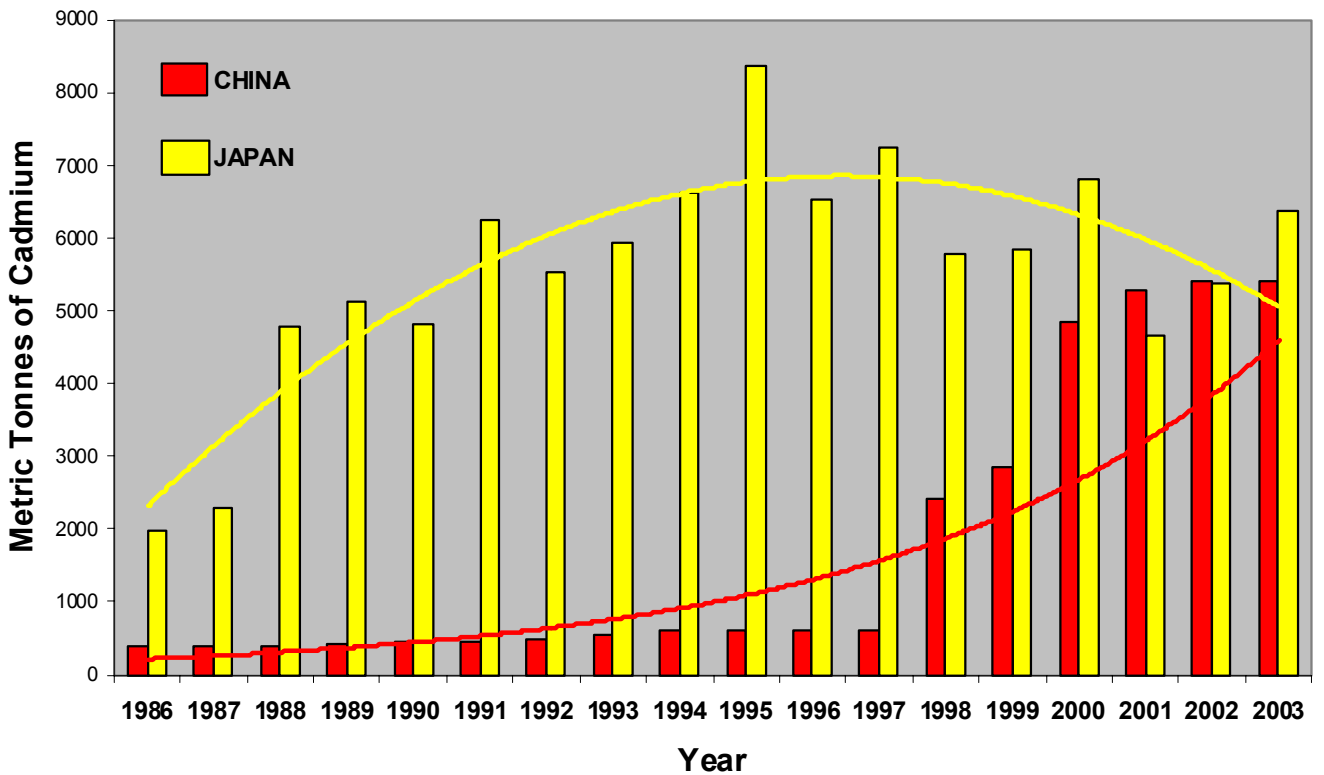
Chinese NiCd Battery Production, 1993 - 2001



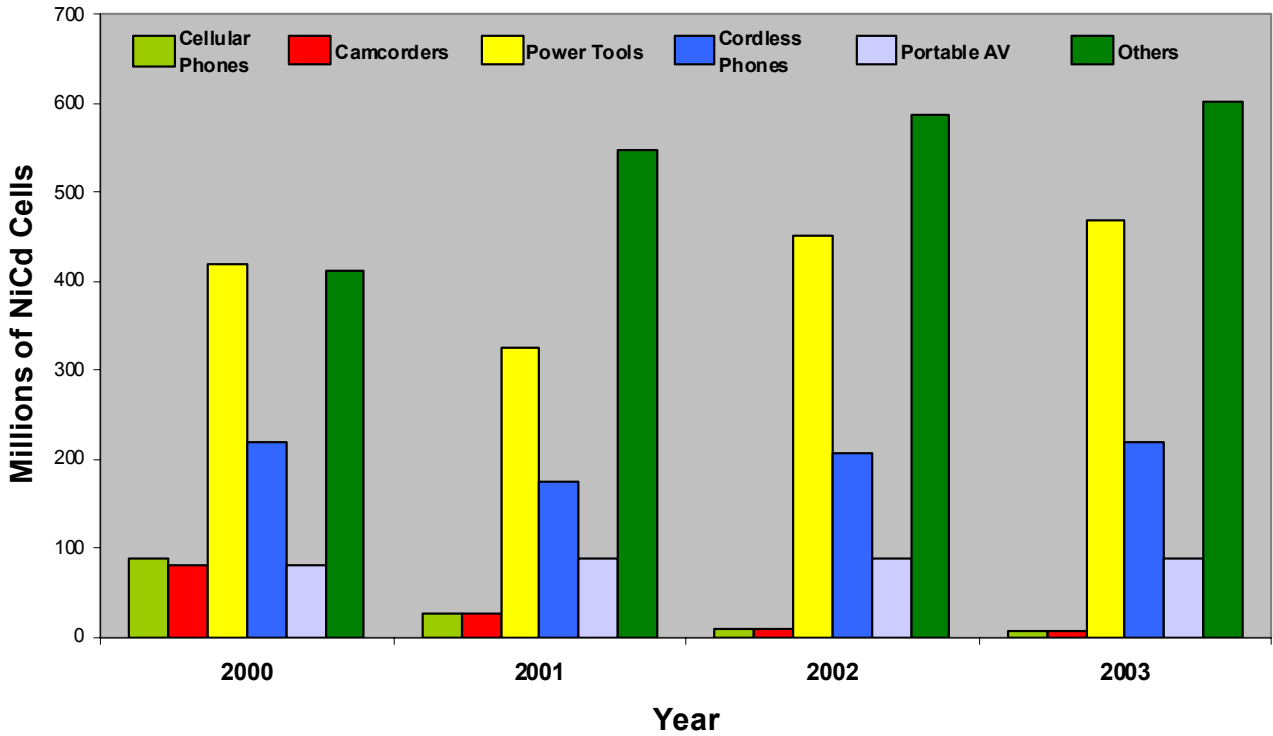
Chinese Cadmium Production and Consumption, 1994 - 2003



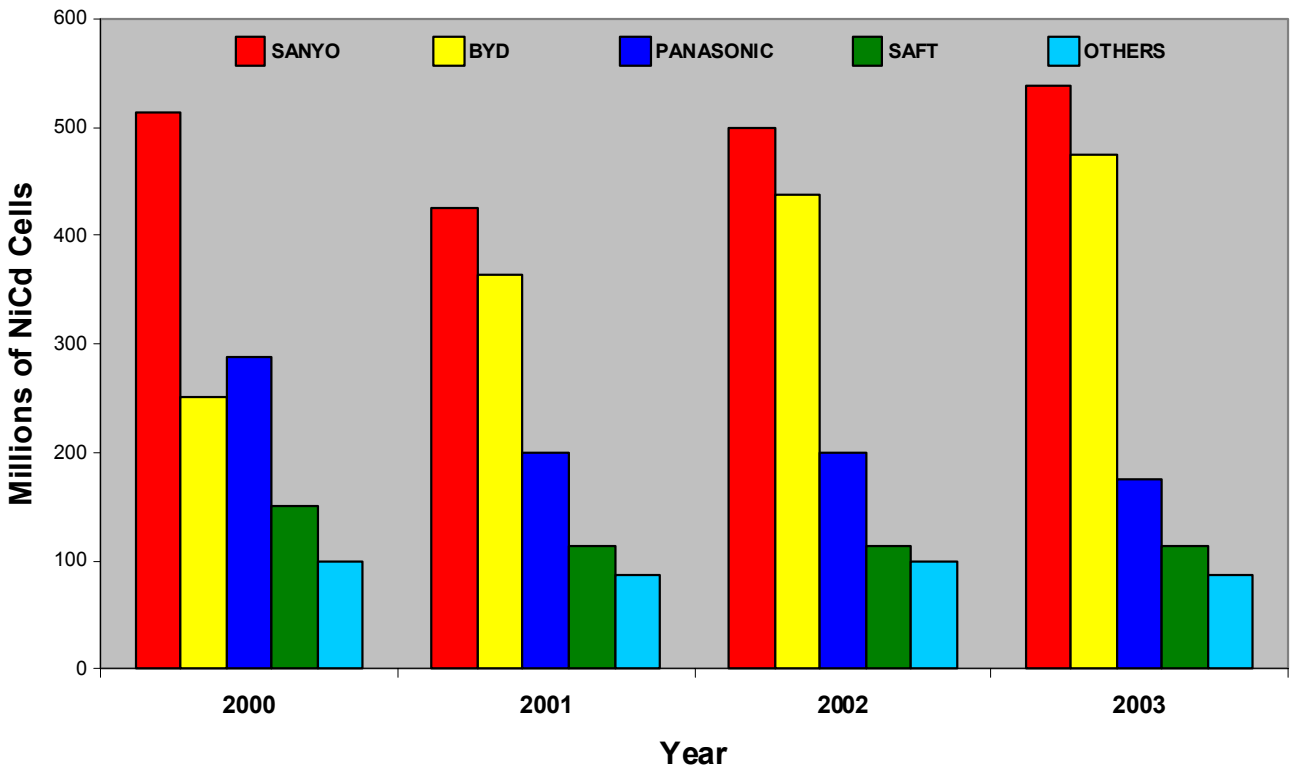
Chinese and Japanese Cadmium Consumption, 1986 - 2003



World NiCd Battery Applications, 2000 - 2003



World NiCd Battery Manufacturers, 2000 - 2003



Summary

- **Primary Cadmium Supply Decreasing**
- **Cadmium Recycling Increasing**
- **Excess Cadmium Stocks Depleted**
- **Cadmium Prices Steady at \$0.60-0.85**
- **Applications Dominated by NiCds**
 - **Consumer: Power Tools, Emergency L&S**
 - **Industrial: Railways, Aircraft, UPS, EVs**
- **China and Japan Dominate NiCds**

Summary

- **Cadmium Consumption Increasing in Both Japan and China But Decreasing in Europe and the Americas**
- **European Commission's Proposed Revision to Battery Directive Will Probably Not Contain a NiCd Battery Ban**
- **However NiCd Battery Collection and Recycling Must Continue to Grow to Avoid Future NiCd Bans**

cadmium.org website

Created (anonymously) and financed by ICdA in 1998

"Neutral" but lists only ICdA members, some now departed

150,000 visits in the last two years !

First wave of 2003 updates now complete, correcting spelling mistakes, giving new addresses, adding websites, adding missing members, removing extinct members

Second wave of updates:

- a) Remove non-members or
- b) Include the whole industry ?
- c) Add ICdA (as sponsor) with logo, address and contact details, or retain anonymity ?

ANNEX IX

International Cadmium Association

Proposed Long Term Budget 2004 - 2007

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
Staffing				
Brussels manager & Washington consultant	108,500	117,500	119,500	121,600
Support				
Environmental/Health support	15,000	15,000	15,000	15,000
Secretarial (through IZA)	5,000	5,000	5,250	5,513
Administration/Accounting (through IZA)	7,500	7,500	7,875	8,269
Operations				
Rent&Rates	14,000	14,000	14,000	14,000
Office Services	3,000	3,000	3,060	3,121
IT Support/Server	4,000	4,000		
Insurance	1,500	1,500	1,530	1,561
Phone/Fax	4,000	3,500	3,570	3,641
Print/Documents	1,000	750	765	780
Postage	1,000	750	765	780
Internal Meetings	10,000	10,000	10,200	10,404
Travel& Activities	20,000	20,000	20,400	20,808
Collect NiCad	2,300	2,300	2,300	2,300
Contingency	5,000	5,000	5,000	5,000
2004 TOTAL	201,800	209,800	209,215	212,777

*Transitory costs to ensure continued activity Jan - Apr 2004 remain to be defined

