

# IMnI Panel Discussion

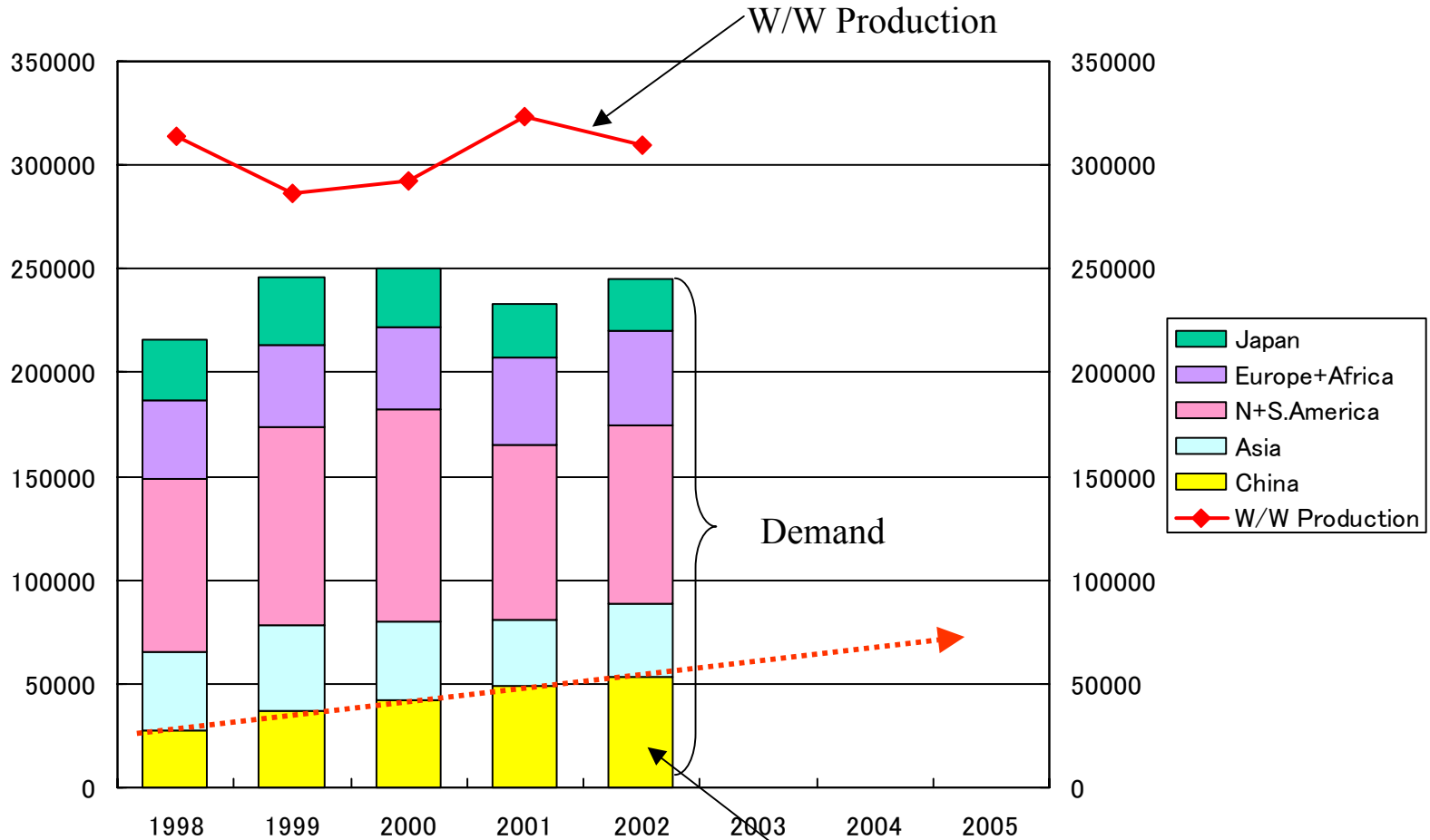
Electrolytic Manganese Dioxide

Rio de Janeiro, June 2003

# Market Summary

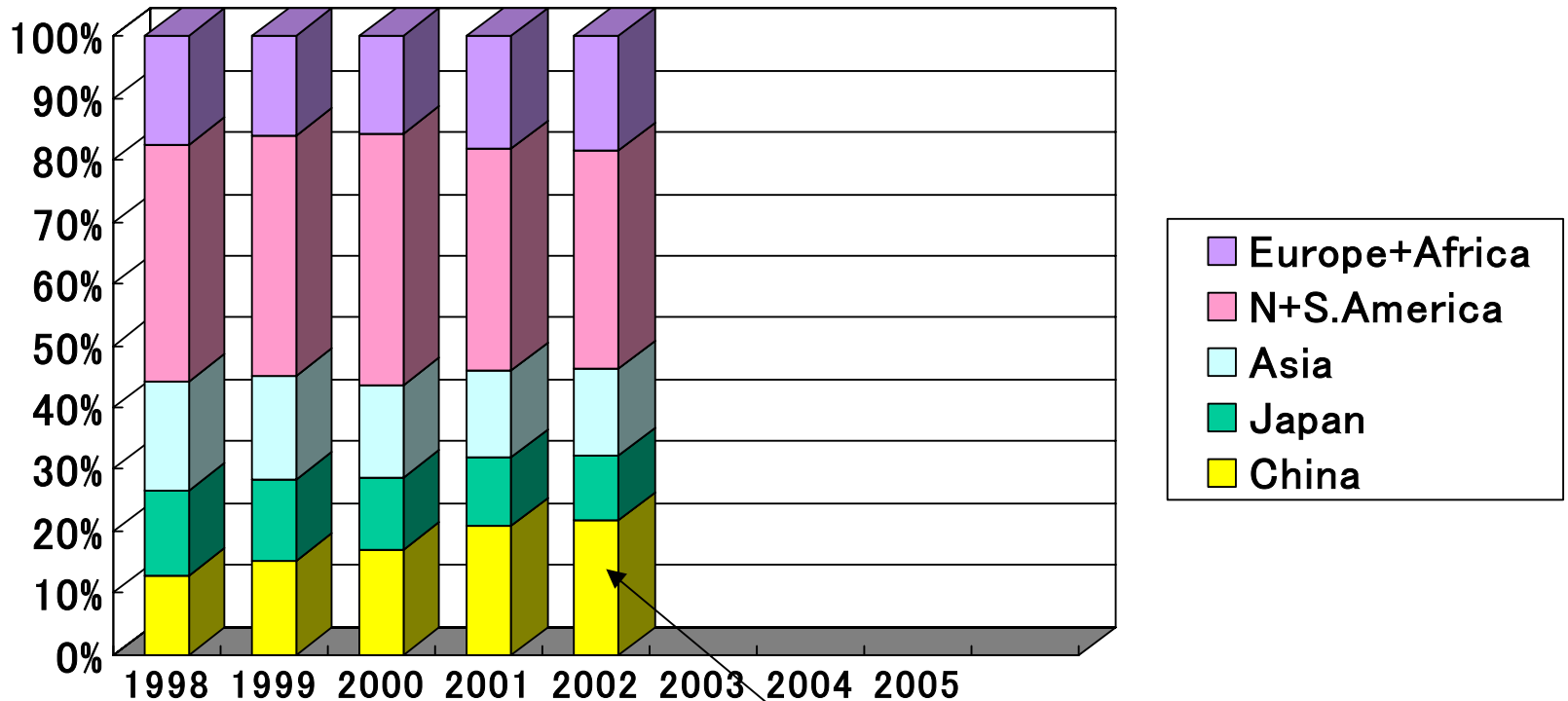
- Annual global consumption was peaked out from 250,300MT in CY2000 and fell back to 245,000MT in CY2002
- Global installed capacity is 309,200MT including China (88,000MT estimated)
- Last two years, excess capacity was created after the tight balance in CY1999-2000
- China is increasing its presence not only in EMD but also in battery business

# EMD Actual Demand Migration



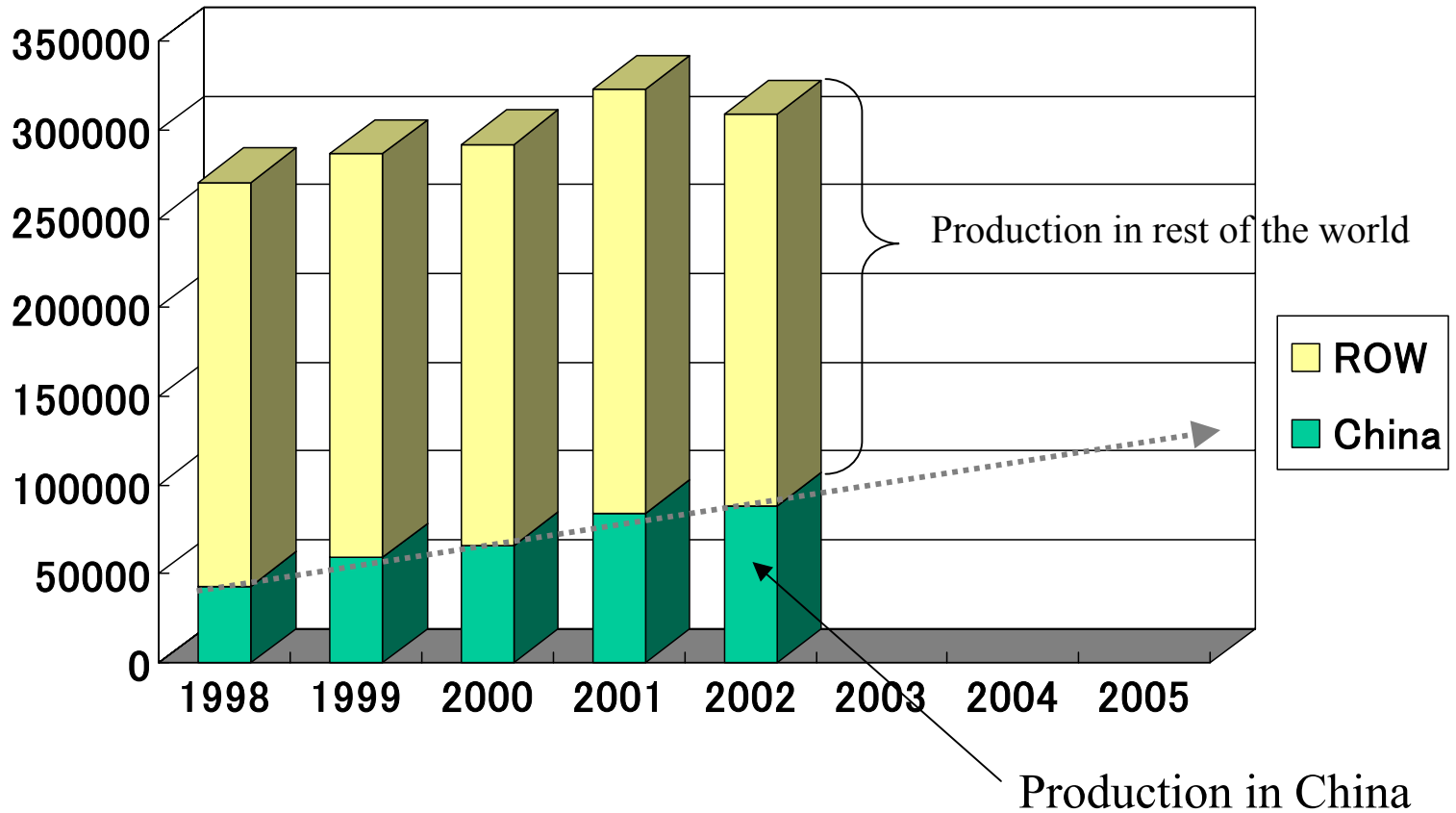
IMnI Rio 2003  
 Demand exceed over 50,000MT in China

# EMD Market by Geography



Steady market growth in China

# EMD Production Capacity, World Wide and China

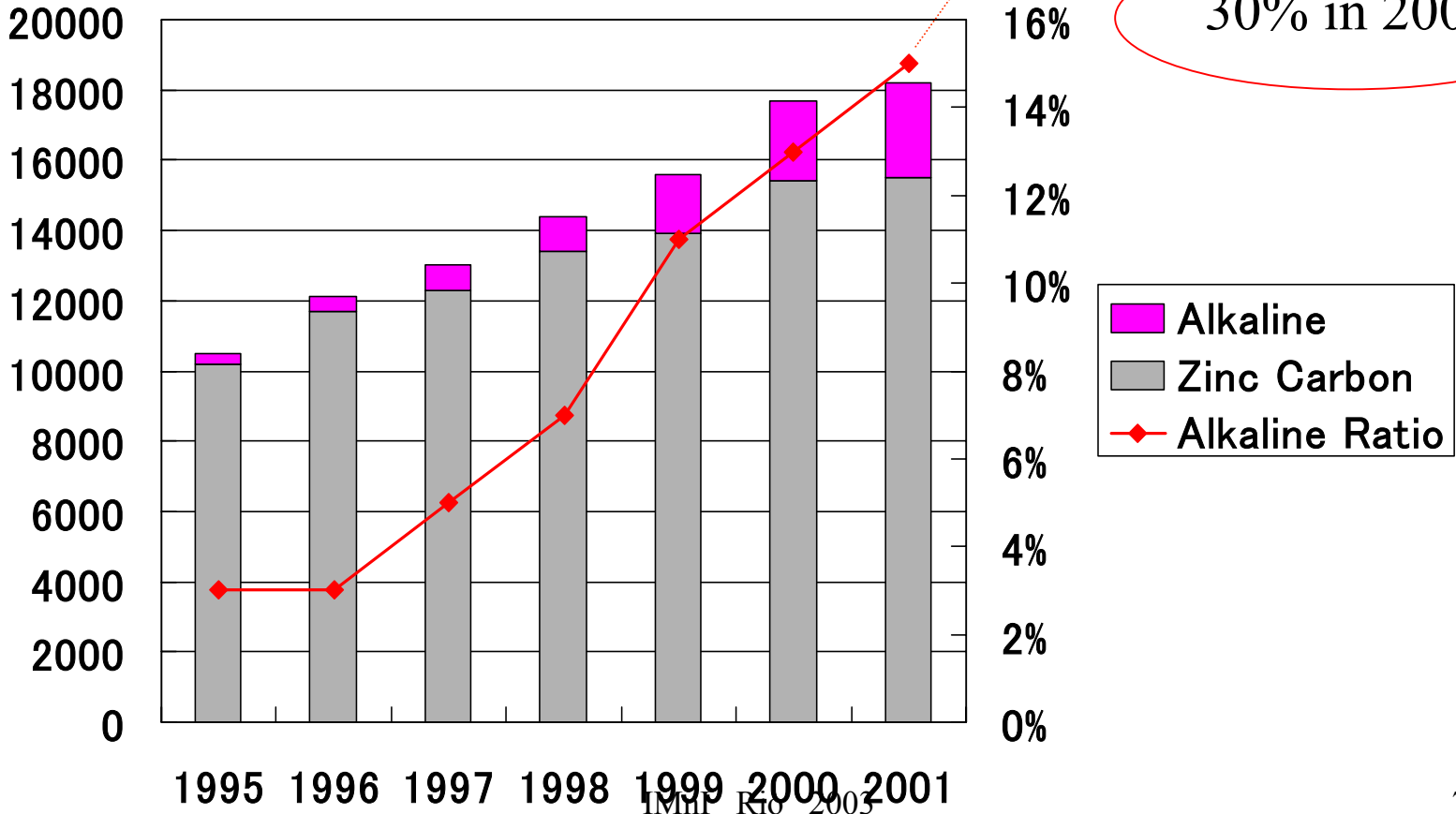


# EMD Production Capacity

Tosoh	53,000 MT
Delta	53,000 MT
Mitsui	43,000 MT
Xiangtan	40,000 MT
Kerr McGee	26,500 MT
Erachem	24,000 MT

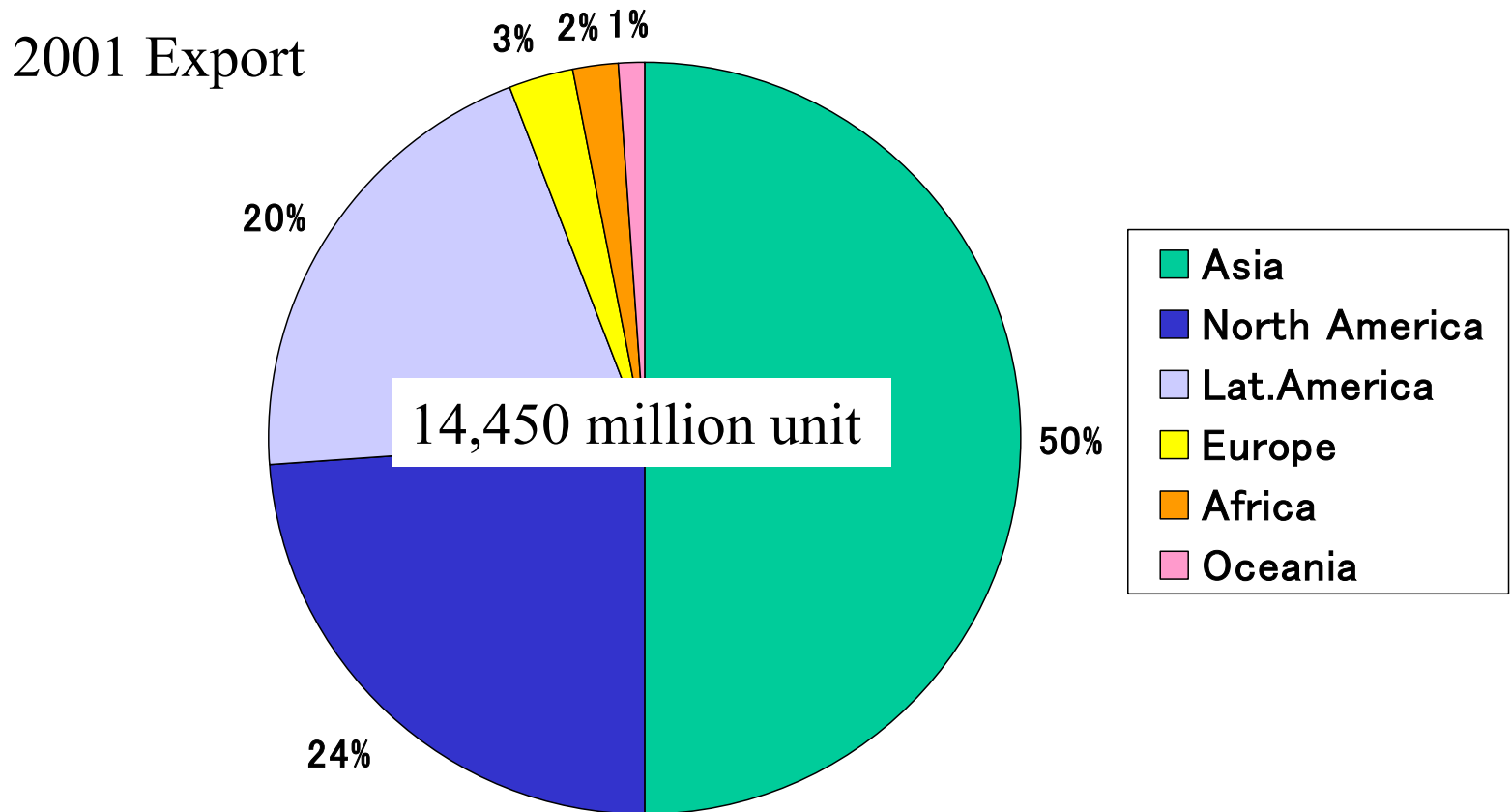
# General Battery Production in China

Million unit



30% in 2005

# Battery Export Destination from China



# Points for the discussion

- ✓ Future demand is unclear ;  
whether growth rate returns to historical one ,  
= 4% per / year
- ✓ China will play key role ;  
how soon China increases its market share  
and how large?!