EVALUATION OF THE AUSTRALIAN SPORTS COMMISSION'S IMPACT ON SPORTS PERFORMANCES AND PARTICIPATION IN AUSTRALIA 1994
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AUSTRALIAN SPORTS COMMISSION'S
IMPACT ON SPORTS PERFORMANCES
AND PARTICIPATION IN AUSTRALIA

1994
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1. **EXECUTIVE SUMMARY**

A separate report, *Evaluation of the Australian Sports Commission’s Impact on Sports Performances and Participation in Australia - An Overview*, has been produced, which provides a summary of the contents of this report.
2. **INTRODUCTION**

2.1 **THE AUSTRALIAN SPORTS COMMISSION**

The Australian Sports Commission (ASC), which incorporates the Australian Institute of Sport (AIS), is the national body through which the Australian Government provides funding for sport. It is responsible for providing policy advice to the Government on all sports matters with national implication, taking account of the Government's objectives in matters such as social justice and foreign policy.

Broadly, the ASC provides funding and support for the development of Australian sport in the following ways:

- provision of grants direct to national sporting organisations for the able bodied and people with disabilities which, in turn, work with State sporting organisations. The national sporting organisations run programs for the development of their sport at all levels (e.g. coaching, international competition, development projects and athlete support). Grants are made primarily through the Sports Assistance Scheme;

- operation of the AIS program which works directly with coaching and development of elite and potentially elite athletes. It includes 21 residential programs located either in Canberra or major centres around Australia, the conduct of training camps for all sports at the AIS, and support programs for elite athletes eg. the Australian Athlete Scholarship Scheme and the Athlete Career and Education Program (ACE);

- operation of the Sports Science and Sports Medicine Centre, the National Sport Information Centre, the National Sports Research Centre and the Australian Coaching Council which provide services to athletes, coaches and researchers working in sport, and which pursue "cutting edge" developments in sport;

- facilitation of the development of a national network for the provision of athlete support. This includes partnerships with State Institutes and Academies of Sport, State Departments of Sport and national sporting organisations. For example, joint programs with State Institutes and Academies of Sport provide training opportunities in centres around Australia (Intensive Training Centres Program) through which athletes have access to coaching, sports science and sports medicine and competitions;

- participation in co-operative and joint funding programs with State education and sports departments to improve the level and quality of sports participation opportunities at the community level; and

- development of bilateral international relations with sporting authorities to encourage exchanges of athletes, coaches, scientists and officials to assist in the development of Australian sport.
State sporting organisations are assisted by State governments, while at the community level local government authorities are major providers of sport and recreation facilities and services.

The ASC does not have a program to fund facility construction around Australia although it owns and/or operates facilities for its AIS program.

Increasingly, the ASC is placing the onus on national sporting organisations to prepare forward plans for the development of their sport at all levels. This approach is based on the premise that sports are best placed to set strategic directions for their sport and to manage and implement their own programs. They should not be dependent solely on Government funding. The approach also permits the ASC to consider the unique characteristics of each sport. In 1994, there were over 100 individual national sporting organisations, including those for people with disabilities but excluding "umbrella" groups, which received some funding assistance from the ASC.

2.2 THE AUSTRALIAN SPORTS COMMISSION'S EVALUATION PLAN

The ASC evaluates its two objectives every four years under the Portfolio Evaluation Program (PEP). This evaluation examines the effectiveness of the ASC in achieving outcomes for its objectives of excellence in sports performance and increased sports participation. It has a direct impact on government funding considerations and forms an important part of the ASC's strategic planning cycle, serving to assist the ASC in determining strategies for the following strategic plan. The conduct of the evaluation is generally timed to enable relevant findings to be included in the formation of the next strategic plan.

In addition to the PEP evaluation, the ASC also conducts other evaluations as part of its evaluation plan. These evaluations are conducted to determine the efficiency and effectiveness of selected program areas of the ASC in achieving lower order outcomes.

In 1992 the ASC conducted its first PEP evaluation. The focus of the evaluation was the achievement of the ASC's two objectives under the "Next Step" program which commenced in 1989-90, although it was agreed that data dating back to 1976 would be collected in order to allow time series analysis to be undertaken. The year 1976 was selected as a base year as 1976-77 marked the first significant funding commitment to sport by the Federal Government, and 1976 coincided with Australia's worst post-war performance at an Olympic Games. It was intended that the data collected for this project would be updated and used as the basis for subsequent PEP evaluations.
2.3 1994 EVALUATION

The Federal Government's decision to introduce the six-year Olympic Athlete Program within the 1993-94 Federal Budget called for the ASC's PEP evaluation to be brought forward, having been originally scheduled for 1996. The main emphasis of the evaluation was the ASC's achievements under its four-year "Maintain the Momentum" program which was, in effect, a continuation of the "Next Step" program and which was in its third year of operation in 1994-95.

For the conduct of this evaluation it was decided to appoint external consultants (Coopers and Lybrand) to examine the ASC's performance against its two objectives, as well as other issues relating to matters of efficiency and procedures for determining the distribution of funds to sporting organisations. The final evaluation report produced by Coopers and Lybrand, which contains the consultant's recommendations for improvement, is available from the ASC.

This 1994 PEP Evaluation is an update of the 1992 PEP Evaluation. The evaluation concentrates solely on the ASC's performance with regard to its two objectives, expanding on some of the analysis already undertaken by Coopers and Lybrand in this area but presenting separate findings. It, therefore, focuses on the ASC's performances during "Maintain the Momentum". The methodological issues addressed in the 1992 evaluation are also relevant to the 1994 evaluation and are not repeated here. (For discussion of these issues see the relevant sections of the ASC's first PEP Evaluation, Evaluation of the Australian Sports Commission's Impact on Sports Performances and Participation in Australia, particularly Sections 5.2 and 6.1.)
3. **PROGRAM DESCRIPTION**

The ASC is a sub-program of the Sport and Recreation Program of the Environment, Sport and Territories portfolio. The objective of the Sport and Recreation Program is:

- to contribute to the quality of life of all Australians by promoting and facilitating opportunities for participation in sport and recreation activities; encouraging sporting excellence, reducing harm associated with the use of drugs in sport, and examining the economic and social impact of the sport and recreation industry.

The ASC's global mission statement is:

- to enrich the lives of Australians through sport.

Its objectives are:

- excellence in elite sports performance by Australians; and
- increased participation in sport and sports activities by Australians.

The organisational design of the ASC is based on the "program logic" model\(^1\). This model facilitates evaluation because it is based on a hierarchy or sequence of intended outcomes, where lower order outcomes need to be achieved in order for the higher order outcomes to be achieved. At the top level there is an overarching goal which can be articulated as a mission statement; at the next level down there is an objective or set of objectives which articulate the outcomes that need to be achieved if the goal/mission is to be achieved. Further levels down outline the more specific outcomes that need to be achieved for the achievement of the higher order outcomes.

The Australian sport program logic is described in Figure 1:

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Australian Sports Commission

Sport program logic

International factors $\rightarrow$ Improved sporting performances in international competition

more intensive/higher standard coaching, competition, sports science, sports medicine, sport information, facilities, like skills opportunities, and living expenses

Improved sporting performances at national level

coaching, management and administration, sport information, competition opportunities, sports science, sports medicine, research, facilities (training and competition), like skills opportunities, living expenses

continued involvement at higher levels of performance

Involvement at local level (schools, clubs, social/non-registered)

It is not possible to identify for any single athlete, or across a number of athletes or sports, the relative importance of coaching, competition etc in achieving performance outcomes.
The ASC is structured in a hierarchical way which also reflects this model, which is shown in Figure 2 below.

Figure 2.

ASC Objectives Hierarchy, Organisation Design, Performance Assessment and Reporting
Figure 2 also shows that the ASC's structure not only reflects the sport program logic model, but is also aligned with a hierarchy of reporting mechanisms which link internal processes with external legislative and parliamentary requirements. In this way the ASC has been able to achieve "best practice" in planning, management and administration.

The Australian Government's and, therefore, the ASC's sports policy like most of its overseas contemporaries is based on two premises:

- a broad base of sports participants is needed if a pool of talented athletes is to emerge - many people participate in sporting activities of their own choosing for enjoyment and health reasons and, from these, some will commit themselves to higher levels of competition and achievement with the most talented moving up to national and international performance\(^2\); and

- the success of top competitors gives inspiration and impetus to the citizens of a nation\(^3\).

The evaluation's terms of reference do not include an attempt to separate and quantify the extent of causality between these factors which are, in any event, interlinked as shown in Figure 3:

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\(^3\) *The Role, Scope and Development of Recreation in Australia*, Professor John Bloomfield, 1973, P4. Commissioned in February 1973 by the then Minister for Tourism and Recreation, Mr Frank Stewart.
In addition to the programs it funds specifically for participation, the ASC assumes that there will be a "demonstration effect" as the successes of elite athletes will encourage participation in sport. There are no known studies either on the magnitudes of demonstration effects or the relationship between such effects and direct funding programs.

There is also no known research on the relationship between the size of a sport's participation base and the level of sporting success in international competition. It is considered that participation levels are only one factor in determining elite level success. Other major factors include quality of development opportunities available to an athlete as he/she moves along the performance continuum, economic conditions prevailing within a country, geographic location and physical characteristics of a country, and social and political philosophies prevailing in or adopted by a country.
4. EXCELLENCE IN SPORTS PERFORMANCES

4.1 METHODOLOGY

Performance information was collected for 44 national sporting organisations. The sports selected to be part of the evaluation were those that were part of the PEP evaluation in 1992 as well as any other sports on the program of events for the Sydney Olympics, to ensure appropriate systems were in place for evaluation work to be undertaken in the lead-up to 2000 and beyond. Taekwondo was not included as part of the evaluation as it had not been confirmed as an Olympic sport prior to the commencement of the project.

Information was collected from the sports for the purpose of establishing broad outcomes for one of the ASC’s two objectives - excellence in international sports performances. Senior and (where appropriate) junior results were collected for major international sporting events. "World standard" competitions such as the Olympic Games and World Championships were selected for the study because it was generally felt that they represented the highest level of competition in these sports as well as the most consistent standard of performance to enable time series analyses to be undertaken, although there are some factors associated with them that affect statistical reliability such as boycotts and changes in the number of countries competing and the number of events conducted. It was recognised that some sports place emphasis on competitions that were not included in the study such as Commonwealth Games, Asian Championships, and Pan Pacific Championships. These were excluded because they limit the number of countries competing and their inclusion was expected to bias the results.

Suitable alternative events were found for those sports that did not have regular World Championships (eg. test cricket) and in other cases world rankings were used to provide a consistent measure of performance levels over time (eg. tennis). In order to observe longer-term trends in sports performances, information was gathered dating back to 1976, the year which saw Australia’s worst post-war performance at an Olympic Games. The 1976-77 financial year was subsequently the commencement of the first significant Federal Government funding commitment to sport.

Funding provided to the sports included in the evaluation represents 88 per cent of the total funding provided to sports in 1993-94, a large enough percentage to allow general conclusions to be drawn about the effectiveness of ASC funding in achieving excellence in sports performance.

In addition to collecting international results, each of the 44 national sporting organisations involved in the study was asked to identify international factors which had some impact on the performances of Australian teams in their sport at world standard competitions. The factors affecting international competitiveness are recorded for each sport and are contained within the individual sports analyses. No attempt was made to analyse the contributions from national sporting organisations in this area, only to note those factors that were identified.
4.2 INDIVIDUAL SPORT ANALYSES

This section contains the detailed analysis of the 44 selected national sporting organisations. Results up to 31 December 1994 have been included in the analysis.

Unless noted otherwise, the following symbols have been used to graph performances at major events:

- **triangle** - the finishing position of an individual or team;

- **square** - where there have been two performances with the same final placing (rowing, for example, had two gold medallists at the 1992 Olympic Games);

- **circle** - where there have been three performances with the same final placing.
4.2.1 ARCHERY

Men

Australian results were stable between 1976 and 1979 but have fluctuated considerably over the past 15 years. Best performances in this time have ranged from a first place at the 1991 World Championships to 48th place in 1993.

The graph shows there was a trend towards improved results between 1981 and 1991 followed by a decline in the following two years. The decline is similar to the trend between 1979 and 1981, which suggests that the lower recent performance levels may only represent a short-term decline. The depth of performances has varied according to the level of best performance in each year.

Men's teams

Men's teams results have varied considerably as shown in the graph right, although by 1992 they had returned to levels similar to 1977.
Women

Archery: Senior women - World Championships and Olympic Games

Australian women's results improved between 1976 and 1981 to achieve a number of placings within the top 10. Since that time, however, there was been a steady decline until 1991 followed by encouraging signs of improvement in 1993. The graph also indicates that Australia did not field women participants in archery at the 1988 and 1992 Olympic Games.

Women's teams

Women's teams results have followed a similar pattern to individual results - declining after reaching high levels in the late 1970s. The women's team dropped from third place in 1979 to 15th place in 1983 and has subsequently remained at similar levels.
Junior results

In the junior category, men's results (above) dropped from a high to a low placing in 1991, while the best performance in the women's (below) has been in the top 10 on both occasions, improving slightly in 1991. Australia was not represented at the 1993 World Championships.
Factors affecting international competitiveness

The following factors were identified by the Archery Association of Australia as relevant to Australia's international competitiveness:

- the profile of archery is much higher in most of the major competing countries. These countries also have considerably larger participant bases and financial resources to invest in elite programs;

- most of the major competing countries are geographically much smaller and less isolated from major competition;

- equipment is expensive in Australia, with import duties increasing the price for participants;

- Australia has had a good level of success considering its participation base relative to countries such as the USA, Belgium, France, England and Canada. Those archers that have been successful for Australia have generally been able to train full-time;

- the establishment of an Oceania region in archery will provide further exposure to international competition. To qualify for the Olympics Australia will need to defeat New Zealand as leading nation in the region;

- the Archery Association of Australia indicated that some of the problems identified above will be overcome to some degree by new funding under the "Olympic Athlete Program".
Australian Sports Commission funding to Archery

Funding to archery has fluctuated considerably since 1976. The main factors determining overall funding levels have been international competition, National Sports Program and Australian Athlete Scholarship Scheme support, all of which have varied considerably. Australian Athlete Scholarship Scheme funding has varied according to the fluctuating Australian performances in international competition. Since the "Next Step" program was introduced in 1989-90, the area which has received the most consistent funding increase has been the National Sports Program.

**Link between funding and performance**

Australian success in archery has generally been achieved by athletes with the personal resources to become full-time athletes. Australia has been unable to achieve consistently high results in archery due to, among other things, the low participant base and the relatively low funding levels to the sport. Consequently, it is not possible to determine the strength of any direct relationship between funding to archery and international performances.
4.2.2 ATHLETICS

Seniors

As the Australian team has won no more than three medals at any Olympic Games or World Championships since 1976, it is necessary to look beyond medal-winning performances as an indicator of Australia's standing in world athletics. For this reason top eight placings have been selected as an appropriate measure although this is a somewhat arbitrary judgement. Athletics is a diverse and multi-disciplinary sport and the top eight placings have been achieved across a range of disciplines from long jump and high jump to discus, shot put, heptathlon, relays, hurdles and sprints. For the purposes of this analysis, however, performances have been grouped together to provide an overview of performances in the sport as a whole.

The above graph shows that except for the 1984 and 1988 Olympic Games, there has been little change in the number of Australian placings in the top eight at major events. It should also be noted that the performances in 1984 were affected by the boycott of the Games by the powerful Eastern Bloc countries, which resulted in an artificially high number of top eight placings in that event.
The following table provides a breakdown of the top eight placings in athletics since 1976:

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To look at the above table another way, the placings have been weighted to give a higher value to the higher placed performances. The graph below shows Australia's performances using this points system, which awards eight points for a first placing, seven for second, down to one point for an eighth placing.

Athletics - Points system for top 8 at World Championships and Olympic Games

The weighted points system described above gives a slightly different interpretation of Australia's performances, indicating that results have improved marginally in 1992 and 1993 even though the number of placings in the top eight has remained the same.
Juniors

Athletics: Juniors - Number of top 8 placings at World Junior Championships

The number of Australian juniors placed in the top eight has varied at each championship. Best results were achieved at the 1990 championships followed by a decline in 1992 and 1994. The graph below, using the weighted points scale described previously, presents a similar finding.

Athletics: Juniors - Points system for top 8 at World Junior Championships
Factors affecting international competitiveness

The following factors were identified by Athletics Australia as relevant to Australia's international competitiveness:

- the political instability in eastern Europe and the reorganisation of countries in that region has resulted in less money being invested in sports programs. This has had a significant effect, particularly in field events;

- athletics is arguably the most competitive of all sports. At the 1992 Olympic Games, for example, athletes from 34 countries won medals in 43 events. Athletics is a major sport in many European and Scandinavian countries, as well as North America;

- the level of dominance of athletes from the former East Germany and Soviet Union and from the United States appears to be declining;

- improved drug testing programs and procedures throughout the world indicate there may have been some progress in eliminating drug use from the sport;

- Australia does not possess the quality and quantity of facilities to compare with other nations competitive in the sport;

- other countries are able to provide greater support for their athletes. The United States, for example, has the vast college system while athletes from the former Eastern Bloc were able to train full-time and receive benefits from the State;

- Australia still provides high levels of athlete support, being the only country to directly fund athletes to compete in Europe;

- a talent identification program has been developed similar to programs already operating in Europe, North America and Africa;

- Australian athletes are required to travel to Europe in the northern hemisphere summer, which is "out of season". While the athletes become used to this type of program there are still some disadvantages created by travel and competing away from a home base;

- athletics is not the dominant sport in Australia and therefore must compete hard with other sports to attract the best "natural" athletes. Financial rewards are also higher in some of these other sports.
Funding to athletics increased significantly in 1980-81 with the introduction of the AIS program. The high point of funding between 1980-81 and 1988-89 was in 1983-84 which can be attributed mainly to a higher grant for international competition. The next major funding increase occurred in 1989-90 under the "Next Step" program which provided greater funding to Athletics Australia and the AIS program, higher competition funding and the establishment of the Intensive Training Centre program for athletics.

Link between performances and funding

Prior to 1988 the general trend of performances was similar to the funding pattern to athletics over the same period. It is difficult to draw conclusions linking funding and performances in athletics because the sport is essentially the sum of 13 separate and quite different sports. Results have varied within each of these disciplines based on the performances of one or two athletes. ASC funding has contributed to the development of an elite athlete and coaching structure and led to a more thorough preparation and greater support for Australia's athletics representatives, enabling Australia to maintain its place in an increasingly competitive international environment.
4.2.3 BADMINTON

Singles

World Championships and Olympic Games tournaments in badminton are conducted as knockout events, which means that athletes are eliminated at various stages of the tournament rather than receiving a specific placing. Badminton was only added to the Olympic program at Barcelona in 1992. The table below has been developed to illustrate the stage of the tournament that Australian athletes have been eliminated (Australia also competed in the 1987 World Championships in Beijing, although results are currently not available).

Men - World Championships and Olympic Games

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The tables on the previous page highlight a number of significant points. In the women's competition, there is a definite trend towards improved performances, emphasised in 1992 by Australia's first-ever quarter-finalist at either World Championships or Olympic Games. It was 1989 before an Australian reached the third round, however this performance level or higher has been achieved at each subsequent event. The women's table also shows that there have been no Australians eliminated in the first round at the last two tournaments when this had been the most common result prior to 1989. This suggests that the depth of Australian women's performances has also improved.

Men's results have been less encouraging. The best result for the period occurred back in 1977 and has been followed by a gradual decline in performance levels to the point where there were no Australian men playing singles at the 1992 Olympic Games and 1993 World Championships.

Doubles

Women - World Championships and Olympic Games

<table>
<thead>
<tr>
<th>Year</th>
<th>1st round</th>
<th>2nd round</th>
<th>3rd round</th>
<th>Quarter-final</th>
<th>Semi-final</th>
<th>Final</th>
</tr>
</thead>
<tbody>
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<td>1977</td>
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<td>1980</td>
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<td>1991</td>
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<td>1992</td>
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<td>1993</td>
<td>X</td>
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</tbody>
</table>

Improvement in women's doubles performances has not been as pronounced as it has for the singles, although the quarter-final result at the 1992 Olympic Games still represents a significant improvement on previous tournaments.

Men - World Championships

Australia has been represented in the men's doubles at three World Championships - in 1980, 1989 and 1991. More recent results show that performance levels have been higher in men's doubles than in singles. Results are:

<table>
<thead>
<tr>
<th>Year</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>Eliminated in round two</td>
</tr>
<tr>
<td>1989</td>
<td>Eliminated in round two</td>
</tr>
<tr>
<td>1991</td>
<td>Eliminated in round three</td>
</tr>
</tbody>
</table>
Mixed - World Championships

Australia has been represented in the mixed doubles at four World Championships, although only once since 1983. The most recent result supports the trend of improving international performances over the last five years. Mixed doubles results are:

- 1977: Eliminated in round one
- 1980: Two teams, both eliminated in round one
- 1983: Two teams eliminated in round one and one team eliminated in round two
- 1991: Eliminated in round three
Factors affecting international competitiveness

The following factors were identified by the Australian Badminton Association as relevant to Australia's international competitiveness:

- much of Australia's international competition is based in Asia, and Australian players find it difficult to adjust to the climatic conditions in Asian countries;

- despite the relative closeness to the Asian region, Australia remains geographically isolated because of its distance from the strong European circuit;

- badminton is not part of the national sporting culture in Australia as it is in other countries such as Malaysia and Indonesia;

- badminton is a low profile sport in Australia which limits the sport's potential to attract the best athletes;

- badminton is a highly competitive international sport with 130 countries affiliated to the sport's international governing body;

- to obtain a world ranking players must compete in a minimum of seven tournaments each year and achieve a minimum of 15 results in these tournaments. (To be eliminated in the first round of each of the seven tournaments, for example, would give only seven results). The only tournaments close to Australia that qualify towards a world ranking are the Australian Open and New Zealand Open, making it essential for Australian players to compete in a minimum of five other overseas tournaments each year (and possibly more depending on results at these events). Athletes in other countries have far more tournament opportunities to achieve a world ranking;

- major competing countries have far greater resources to put into badminton programs. Indonesia, for example, has its own badminton institute;

- there is not enough funding for athletes to adequately prepare for major international events. The sport believes that new funding under the Olympic Athlete Program will help to overcome this problem;

- Australia's elite athletes are required to fund a considerable proportion of their international programs themselves. A current Australian player has estimated an annual personal cost of around $10,000 a year to compete on the international circuit;

- Australia is trying to establish its own club-based national league to enable the second tier of players to compete against the country's best athletes and expand the sport's elite player base. The high cost of domestic travel is one of the main barriers to the establishment of the league.
Prior to the "Next Step" program in 1989-90, funding to badminton fluctuated on an annual basis depending on the allocation for international competition in that year. There is still some annual variation in funding levels, although the overall amount provided to badminton has more than doubled since 1988-89. The main area to increase has been grants to the Australian Badminton Association. Support for international competition has also increased in recent years.

Link between funding and performance

The funding graph above shows that the major increase in funding to badminton is roughly coincidental with the significant improvement in performances at major tournaments, particularly in women's singles but also in men's, women's and mixed doubles. Performances at World Championships and Olympic Games have been consistently higher since the funding increases which began under the "Next Step" program in 1989-90.
4.2.4 BASEBALL

Senior

Baseball: international results - senior men's team

![Graph showing placing over years for different events]

The Australian men's baseball team has undertaken a varied international program over the last 15 years, due to financial difficulties in the mid to late 1980s and the "invitation only" status of some tournaments. The team now competes regularly in the Asian Championships which although a zonal event, is still of a world standard given the playing strength of the Asian countries. Australia was placed fourth at the first three Championships before improving to third in 1993.

Junior

Australia's results at the World AAA Championships were consistent between 1987 and 1993, with a top five placing each year except for 1990. The eighth placing in 1994 represented a significant decline and Australia's lowest performance since 1986.
Factors affecting international competitiveness

The following factors were identified by Baseball Australia as relevant to Australia's international competitiveness:

- the Australian team is disadvantaged by playing major international tournaments "out of season";

- a change in the zonal qualification system should favour Australia by removing the need to qualify through the very tough Asian zone. This will increase Australia's chances of qualifying for major events such as the Olympic Games;

- the loss of international standard players to major league organisations in the United States creates a constant drain of playing talent, particularly emerging players at the "AAA" and "AA" level. Eligibility restrictions prevent these players from representing Australia at senior level in the future. There are currently 45 Australian players in the US professional leagues, which means that Australia is effectively sending its second or third best team to major events;

- other countries invest enormous sums of money into baseball programs, particularly the United States, where baseball is the national sport;

- the sport has experienced strong recent growth in the Asian region, which now boasts three of the world's top baseball nations. Baseball is also very popular in Central and South America;

- major competing countries in Asia and North and Central America have much larger participation bases than Australia;

- despite being reasonably close to the Asian region, Australia remains isolated and does not have regular access to high level international competition;

- Australia has a shortage of first-class baseball facilities compared to its major competitors;

- the Australian baseball team is frequently under-strength due to the unavailability of leading players because of work and financial commitments. Players are often required to take leave or leave without pay to play for Australia, and for some work or other pressures prevent them from being available to play at this level on all occasions.
Funding to baseball increased marginally in 1987-88 and again in 1988-89, which was against the trend for most sports. There were further annual increases up until 1991-92 caused by greater support in all areas. In 1993-94 there was a significant increase with the first full year's funding to the AIS baseball program (the program commenced late in the previous financial year).

Link between funding and performance

Given the variation in the Australian senior team's international program over the long-term, it is not possible to establish any direct link between funding to baseball and international performances. International results have also been inconsistent, with performances at the Asian Championships marginally improving and results from the World AAA Championships showing a decline.
4.2.5 BASKETBALL

Men

The graph gives the appearance that Australia has improved only marginally at World Championship and Olympic level since 1976. In reality, however, the improvement has been more significant. The Australian men's team is now entrenched in the second-tier of nations, behind the main powers of the sport - the United States, Croatia and Russia. As a result, the Australian team has moved ahead of a number of the European and South American countries that were previously superior to it.

Women

Although results declined in the early part of the 1980s, by 1994 the Australian women's team had achieved the highly respectable world ranking of fourth.

Despite not qualifying for the Barcelona Olympics in 1992, due mainly to a quirk in the draw at the qualifying event, the Australian women's team has been one of the world's leading teams since 1988.
Junior men

Results at the Junior World Championships have not changed significantly over the period. The best result was a fifth placing in 1987, although the ninth placing at the next championship in 1991 represented a return to earlier levels.

Junior women

Australian results at the Junior Women's World Championships have shown an obvious and significant improvement, culminating in a gold medal at the 1993 tournament, which represented a major breakthrough for Australian basketball. The victory was the first at the World Championship level for an Australian basketball team.
Factors affecting international competitiveness

The following factors were identified by Basketball Australia as relevant to the international competitiveness of Australian basketball teams:

- Australia's geographical isolation greatly reduces access to regular top level international competition. There are high costs involved in making long overseas tours, and there is little incentive for the leading countries to tour Australia as they have access to the same standard competition much closer to home;

- Australia's basketball season does not coincide with North American and European basketball seasons. The Olympics and World Championships tend to fall within the Australian season, which limits the amount of preparation time the team has together (changes are being made in Australia to increase the preparation time available to Australian teams);

- due to Australia's vast size and relatively small population, domestic travel time and costs are much higher than in most other countries;

- the majority of competing countries have much larger population bases, and thus have a larger pool of talent from which to draw;

- financial inducements and high salary packages paid to professional players in America and Europe encourage more players to enter the sport. They also attract Australian players overseas, which limits their availability to play and prepare with the national team as part of the national program;

- in many countries basketball is virtually part of the culture and participation at an early age is the norm. The situation in Australia has improved in the last 10 years (and continues to improve) as basketball has become one of Australia's mainstream sports, but still not to the level apparent in other countries;

- the natural characteristics of different nationalities, particularly black Americans, are believed to contribute to success at the international level;

- the standard of play internationally continues to rise. While Australian teams are constantly improving, the rest of the world is also moving ahead;

- the recent inclusion of professional players from the United States has enabled the US team to dominate the 1992 Olympic Games and 1994 World Championships, virtually reducing the rest of the world to a contest for the silver and bronze medals;
- basketball is one of the most widely-played sports in the world. Almost 200 countries are affiliated with the international basketball body FIBA, and the bulk of these take part in international competition;

- the break-up of countries in eastern Europe has resulted in more quality international teams. It has also strengthened the European competition which has the potential to assist other countries presently ranked below Australia such as Germany and France;

- with the recent introduction of a world under-23 championships for men, Basketball Australia is now required to support an international program for five teams. This places a high demand on the limited resources available for international competition preparation for these teams.
Basketball was one of the original sports admitted to the AIS in 1980-81. Funding increased steadily up to 1984-85 but declined in all areas in the following four years. After the introduction of the "Next Step" program in 1989-90 basketball was identified as one of seven targeted sports, and as a result funding levels doubled. The Intensive Training Centre program for basketball was established, and funding increased in all other areas. There has been no support provided under the Australian Athlete Scholarship Scheme in the last two years which has contributed to a decrease in funding.

**Link between funding and performance**

Performances in women's basketball have displayed an upward trend since the introduction of "Next Step" funding, the junior women in particular making significant progress in this time. Australia's men's team also consolidated its position in the world's top six nations at the most recent World Championships, a notable achievement given the changes internationally in the last five years. While there appears to be some relationship between the funding provided to basketball and the sport's international performances, it is not possible to determine the strength of any such relationship.
4.2.6 BOXING

Olympic Games

The boxing tournament at the Olympic Games is conducted on an elimination basis. The table below indicates the stage of the tournament that Australian boxers were eliminated.

<table>
<thead>
<tr>
<th></th>
<th>1st round</th>
<th>2nd round</th>
<th>3rd round</th>
<th>Quarter-final</th>
<th>Semi-final</th>
<th>Final</th>
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</table>

The above table indicates that in most cases Australian boxers have not progressed past the first round of the Olympic Games. Australia has won one Olympic boxing medal since 1976, which was a silver in 1988. There has been a slight overall improvement in results since 1980, with at least one Australian progressing beyond the second round at each of the last three Olympics.
World Championships

<table>
<thead>
<tr>
<th></th>
<th>1st round</th>
<th>2nd round</th>
<th>3rd round</th>
<th>Quarter-final</th>
<th>Semi-final</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>1982</td>
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<tr>
<td>1986</td>
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<td>1991</td>
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</table>

Apart from the 1991 World Championships, which were held in Sydney, Australia's performances at World Championships have been similar to Olympic Games results, with a majority of competitors being eliminated in the first round. Results from 1991 gave Australia its best overall performance at a World Championships or Olympic Games since 1976.

Factors affecting international competitiveness

The following factors were identified by the Amateur Boxing Union of Australia (ABUA) as relevant to Australia's international competitiveness:

- success at international boxing tournaments can be assisted by a favourable draw. Competitors are not seeded as they are, for example, in tennis tournaments. According to the ABUA, many Australians have been eliminated by the eventual gold medal winner, indicating that a loss in the early rounds may reflect an unfavourable draw rather than the boxer's ability relative to the rest of the competitors;

- Australian amateur boxers do not receive sufficient Government support to adequately prepare for international competition;

- Australia is geographically isolated from the main competition centres of Europe;

- amateur boxing is a popular international sport, with 187 countries affiliated to the International Amateur Boxing Association;

- the Australian Medical Association's campaign against boxing has prevented the ABUA from obtaining any sponsors from the corporate sector.
Grants for international competition have been the primary funding area in boxing since 1976. Australia hosted the World Amateur Championships in 1991-92 which increased the allocation to the sport in that year and also in 1990-91. In 1993-94 funding to the Australian Amateur Boxing Union was suspended indefinitely in all areas except international competition. The last two years has, however, seen an increase in the support provided under the Australian Athlete Scholarship Scheme.

**Link between funding and performance**

Given the historical low levels of funding provided to boxing since 1976, the limited scope of the funding provided and the existence of the other international factors identified earlier, it is not possible to determine the extent of any relationship between the support provided to boxing and the sport's international performances. There is some similarity in the trend of both variables in that there has been limited change in either - both funding and performances have remained relatively constant.
4.2.7 CANOEING

Sprint

The trend line of best placings in men's sprint canoeing indicates an improvement in overall performance levels. Results were at a high level in the late 1970s and 1980 but declined in 1981. A feature of the above graph is the improvement in performance levels as well as the depth of results since 1988. Australia has won a medal at each World Championships and Olympic Games since 1988, including three gold medals. In the previous 11 events, Australia did not win a gold medal and finished without a medal of any colour on seven occasions. The results from the most recent World Championships were the best ever by an Australian team.

In the women's graph below, results have improved considerably since 1976 and have been generally consistent over the last seven years. With the exception of 1992, Australia has achieved a placing in the top six in the world at each world event since 1986. There have also been three placings in the top eight at three of the past four world events.
Marathon

Prior to 1994 Australia had maintained a very high standing in men’s marathon canoeing as shown in the graph above - winning a gold medal in four consecutive world events between 1985 and 1988 and, following a brief decline, again in 1991 and 1992. Results from the 1993 World Cup are currently unavailable, while the results from the 1994 World Championships were only the second occasion since 1981 that Australia’s best placing has been outside the top six.

The graph below indicates that women’s performances have been almost the equal of the men’s - one World Championship in 1987 and 1994 and two in 1988, and placings in the top three in five of the other six events.
Slalom canoeing was added to the Olympic program for the 1992 Games in Barcelona and has been retained for Atlanta in 1996. Individual placings for Australian athletes have been highly consistent over the entire period, the high points on the graph in 1979, 1983 and 1987 being results from teams events. There has been a noticeable improvement in individual placings since 1989, particularly in 1993.

Individual results have also improved considerably in women's slalom canoeing. The high points of seventh in 1979 and 1983 and fifth in 1987 were results of teams events. In 1989 an individual placing of fourth was achieved and in 1992 Australia won a silver medal in the women's slalom. There was some decline in the results at the 1993 World Championships with a placing just outside the top 10. There is only one women's slalom event (the K1).
The above graph gives the impression that results in men's wildwater canoeing have declined significantly. While there has been a decline in results, the main reason for the pronounced drop in the trend line is the fact that since 1987 Australia has not been represented in the teams competition. Best individual placings in these pre-1987 events are as follows: 1977 - 43rd; 1979 - 18th; 1981 - 13th; 1983 - 14th; 1985 - 8th; 1987 - 9th. Results of 24th in 1989 and 1991 have returned individual placings nearer to levels of the early 1980s.

The graph below for women's wildwater canoeing shows individual World Championships results only (there is only one wildwater event for women and Australia has not been represented in the teams section). As the graph indicates, results have varied considerably - best placings in the top 20 at two events and outside the top 20 in the other four. The most successful event for Australia was clearly 1981 with a fourth and a fifth placing.
Factors affecting international competitiveness

The following factors were identified by the Australian Canoeing Federation (ACF) as relevant to Australia's international competitiveness:

• the availability of suitable water courses is low in Australia. Access can also be quite difficult, with courses often in remote areas;

• a number of competing countries have more facilities available to their athletes;

• canoeing has a low participation base in Australia;

• financial support and incentives are not as great in Australia as they are in major competing countries, although in recent years the margin has narrowed;

• Australian athletes have less access to major international competition than athletes from competing countries;

• keeping pace with technological change is an important factor in remaining competitive internationally. The ACF believes funding is necessary to ensure Australia keeps up-to-date with technological advances.
Funding to canoeing increased up to 1984-85, mainly due to increased competition and NSO funding, before declining in the following two years. In 1987-88 an AIS program was introduced in sprint canoeing and was expanded to include slalom canoeing in 1989-90. The funding increase under the "Next Step" program in 1989-90 was marked by higher allocations in all categories and the establishment of the Intensive Training Centres program for canoeing. In 1992-93 slalom canoeing was discontinued as an AIS scholarship program although AIS support is being provided to athletes and coaches through the ACF.

**Link between funding and performance**

It is significant to note that the canoeing disciplines to have benefited most from the substantial funding increase in 1989-90, sprint and slalom, are the disciplines to have displayed the most significant performance improvement. The other disciplines, with the exception of women's marathon, have declined based on the most recent available results. While there is some evidence to suggest a link between funding to canoeing and performances in both the Olympic and non-Olympic disciplines, it is not possible to determine the strength of any direct link due to the presence of other international factors.
4.2.8 MEN'S OUTDOOR CRICKET

Test cricket - matches won

As the Australian cricket season is in the summer months, international test series commence late in one year and finish early the following year. For consistency, matches have been grouped according to the year in which the test series commenced. For example, the 1975-76 series against the West Indies, won 5-1 by Australia, is shown against 1975.

The graph demonstrates that from 1978 to 1989 Australia won more than three test matches for the year only once. After a lean period between 1984 and 1988, the Australian team has consistently won more matches over the last six years. The particularly successful years of 1989 and 1993 coincide with Australian tours to England, which resulted in convincing series victories.
Test cricket - winning percentage

The graphs above and below provide more meaningful indicators of the performances of the Australian cricket team between 1976 and 1994 by examining wins and wins and draws as percentages of the total matches played for the year. The graph above indicates that only twice between 1975 and 1988 did Australia win 50 per cent of its matches in a year, the bulk of the winning percentages being in the 25-40 per cent range. Since 1989 results have improved and Australia has won at least half of its test matches in three of the last six years.

The graph below, which adds the percentage of draws to the percentage of wins, provides a different picture. It is important to consider draws when measuring performance because they are so common in test cricket (as shown in the graph on the previous page). When examined in this manner, the graph indicates that on three occasions Australia has completed a year’s matches unbeaten and on only two occasions the win and draw percentage has been lower than 50 per cent.
One-day cricket - matches won

The above graph highlights the increase in the amount of one-day cricket played since 1975, although the number of matches each year has been fairly stable since 1982. The number of wins has varied from year to year, due largely to the strength of the teams faced by Australia each season.

The graph below shows that Australia has become more successful at international one-day cricket over the period since 1976. In terms of the percentage of matches won, the Australian team won less than half of its one-day matches between 1978 and 1984, but has won half or more than half of the matches each year from 1987.
Factors affecting international competitiveness

The following factors were identified by the Australian Cricket Board as relevant to Australia's international performances:

- the Australian team will be required to play a greater amount of international cricket as the number of test-playing countries increases. Since 1992 the International Cricket Council has become a more professional controlling body for the game and has determined that more countries will participate in test and one-day cricket. This decision coincides with the re-admission of South Africa after more than two decades out of international cricket;

- places within the Australian team are limited given the finite number of players on a team (11) and the potentially long playing careers of elite cricketers. This can lead to limited turnover of players and inhibit the progress of emerging players through to senior level. There has been substantial player turnover since 1992 which is considered a positive factor for Australian cricket;

- the Australian coaching network has been extensively developed and improved in recent years to be the equal of any in the world. Development and identification networks are also considered to be at the cutting edge and to make a significant contribution to Australia's performance.
Funding to the Australian Cricket Board has traditionally been high while funding for competition has been comparatively low. NSO grants have increased marginally over the past decade, however the main factor in overall funding levels is the allocation to cricket's AIS program, which commenced in 1986-87.

**Link between performance and funding**

Given that funding to cricket is provided mainly at the developmental level (for talent identification, coaching, junior programs, etc) it is not possible to draw definite conclusions about a possible link between ASC funding to cricket and senior international performances. With the recent turnover of senior players in the Australian team there is now some evidence of the contribution of the AIS cricket program to the performances of the Australian team. The vast majority of new players to the Australian team have graduated from the AIS program and have assisted in maintaining Australia’s very good international record over the last five years.
4.2.9 CYCLING

Men's track cycling - World Championships

Although always at a high standard, Australia's performances at the World Championships have shown significant improvement since 1989. The graph demonstrates a higher concentration of performances in the top five in recent years, particularly 1993, where there were five placings in the top two in the world and seven placings in the top seven. There was only a marginal decrease on this level in 1994, with six placings in the top six.

Men's track cycling - Olympic Games
The overall trend highlights considerable improvements in the depth and level of results - from no medals in 1976 and 1980 to two silvers and two bronze in 1988 and three silvers in 1992. The most significant aspect of the graph is not the gold medal performance in 1984 (a Games affected by the Eastern Bloc boycott), but the consistency and high performance levels in the last two Games, which were not affected by boycotts.

Men's road cycling - World Championships

Performances in road cycling have also displayed an upward trend similar to track cycling. Best placings and the depth of performances have been at their highest levels in recent years.
Men's road cycling - Olympic Games

The best placings by Australian road cyclists at the Olympic Games have been reasonably consistent between 1976 and 1992. What has significantly improved, however, is the depth of performances - two placings in the top 10 in 1988 and three in the top 20 in 1992.
Women's track cycling

Australia has only been represented in international women's track cycling events since 1988. On most occasions there has been only one Australian representative at these competitions. Best performances each year have been in the top 10 except for 1991, with the silver medal at the 1992 Olympic Games the highest placing. There was only a slight decline at the 1994 World Championships with a best placing of fourth.

Women's road cycling
The overall trend shows that prior to 1994 performances had improved over the period of the analysis, the highlight being the gold medal in the women's road race at the 1992 Olympic Games. Performances in the top 10 are especially noteworthy in individual road cycling given the number of competitors in the race. It is not possible to determine whether the results from the 1994 World Championships are the beginning of a downward trend or an isolated drop in performances (similar to 1988).

World Junior Championships

For most of the past decade (with the exception of 1986 and 1987) Australia has produced a junior track cyclist in the top three in the world. What has changed since 1989 is the depth of talent - since 1989 Australia has had at least three athletes placed in the top three each year, an achievement which did not occur once in the previous eight championships. There was further improvement at the 1994 World Championships with two track gold medals for the first time.

Australia also won its first-ever gold medal in road cycling at the 1994 World Junior Championships in the 20km individual time trial. The Australian junior team placed 10th and 6th in the road team time trial in 1992 and 1993 respectively.

Australia also had representatives in the women's road and track races at the 1994 Junior World Championships, placing third in the sprint, 14th in the points race and 25th in the road race. Previous World Junior Women's results were two second placings (sprint and points race) in the 1993 Championships, and a sixth placing in the individual pursuit in 1992.
Factors affecting international competitiveness

The following factors were identified by the Australian Cycling Federation as relevant to Australia's international competitiveness:

- the level of government and sponsorship support for cycling in Australia is much lower than in many other countries. Resource levels in these countries enable a fully professional approach to be adopted for the sport;

- other countries which rank highly in cycling are generally much smaller geographically and less isolated from major competitors than Australia;

- Australia's main international competitors generally have a much larger participation base in cycling and the sport has a higher profile and prestige;

- Australian cyclists have less opportunities to take part in international level competition (although the Australian Cycling Federation believes this situation has improved in recent years);

- Australian facilities have improved significantly in recent years with the construction of a world standard velodrome in Adelaide. In general, however, facilities overseas remain superior;

- the major competitors have well developed elite programs and coaching structures. The elite program and coaching structure in Australia has also progressed and is now emerging as one of world standard;

- there has been an improvement in the fight against the use of performance enhancing drugs with a general decline in systemic use and formal programs. Some suspicion remains, however, regarding certain individuals and teams;

- Australia does not have the capacity to retain riders in cycling programs in the face of lucrative offers from international professional cycling teams;

- the recent move to allow amateurs and professionals to compete together will change World Championships and Olympic competition as well as the manner in which Australia's programs operate;

- technological developments also have a significant influence on international competitiveness.
Cycling received moderate levels of funding prior to the introduction of the AIS cycling program in 1986-87. There was a further substantial increase in 1989-90 under the "Next Step" program, which enabled the establishment of an Intensive Training Centres program for cycling and higher support for international competition, and under the National Sports Program and Australian Athlete Scholarship Scheme. The addition of a road cycling program to the AIS in February 1991 has resulted in additional funding in recent years.

**Link between funding and performance**

The funding graph is similar to the trend in results graph for men's track cycling, which showed more consistent performance levels from around the mid-1980s, following the establishment of the AIS program. Results improved considerably once the AIS had been operating for more than 12 months. Results in road cycling also appear to have improved following the introduction of the road cycling program at the AIS.

The introduction of the "Next Step" program has coincided with improved performances in women's road and track cycling and best-ever performance levels in junior cycling. The most notable elements of the junior performances have been the consistency of top three placings since 1989 and the successful introduction of female competitors to world junior competition.
4.2.10 DIVING

Women - Olympic Games

Women's diving - Olympic Games

Women's diving results have improved considerably since 1976, with two placings in the top 12 in Barcelona. It is important to note the significance of boycotts at the 1980 and 1984 Olympics, which are likely to have contributed to better placings at these Games.

Women - World Championships

Women's diving - World Championships

Performances at World Championships, which have not been affected by boycotts, show a more consistent pattern. Performances declined after the 1978 World Championships before improving in 1991 in Perth, with a best-ever individual result (sixth) as well as two other top 10 placings. At the most recent World Championships in 1994 performances returned to pre-1991 levels. Performances at these Championships are considered to have been adversely affected by the timing of the event, which was held directly after the Commonwealth Games.
Men - Olympic Games

As the graph indicates, the results in Barcelona in 1992 represented a significant improvement on previous results. A best-ever placing of fourth was achieved and results in both springboard and platform disciplines were improved. Performances in 1980 and 1984 were more than likely affected by boycotts at these Games.

Men - World Championships

Australian performances at World Championships showed slight improvement up to 1986 before a major improvement in 1991. At the 1991 Championships there were four Australian divers equal to or better than the highest performance at the previous World Championships. The upward trend of best placings continued in 1994 although the depth of overall performances was lower.

The trend of improving performances has also been evident at the junior level, with a first-ever gold medal at the World Junior Championships in 1991.
Factors affecting international competitiveness

The following factors were identified by the Australian Diving Association as relevant to Australia's international competitiveness:

- Australia's major competitors generally have much larger participation base from which to select athletes;
- diving enjoys a much higher profile in many other countries than it does in Australia;
- major competing countries are generally much smaller geographically and less isolated from international competition than Australia;
- facilities overseas are generally much better and more readily available than in Australia, and administrative support structures are greater;
- all major competitors have well-developed elite diving programs and coaching structures;
- many countries have rigorous talent identification programs which emphasise the build of the athlete;
- many countries are believed to offer their divers more generous support schemes and sponsorship than Australia;
- the break-up of the former Soviet Union has resulted in more countries competing in international competition.
Australian Sports Commission funding to Diving

Funding to diving increased significantly in 1984-85 following the sport's admission to the AIS. Diving followed the general trend by experiencing reduced funding in 1988-89, although in 1989-90 there were increased levels of support with the introduction of the "Next Step" program. International competition, National Sports Program and grants to the Australian Diving Association were the main areas to benefit from "Next Step" funding.

Link between funding and performance

There are some similarities between the funding provided to diving and the sport's international performances. Performances improved in the early 1990s at a time when funding to diving was at its highest under the "Next Step" program (the 1991 World Championships results were probably also influenced by the fact that Australia hosted the event). Interestingly, performances at the 1994 World Championships showed a decline in women's performances at a time when funding has also declined. The men's performances were improved on the previous World Championships but lower than at the 1992 Olympic Games. While there is evidence to indicate a link between funding and performance, it is not possible to establish any direct relationship due to the presence of other international factors.
4.2.11 EQUESTRIAN

International results - Olympic Games

Individual

Performances declined at the 1984 Games after Australia did not send an equestrian team in 1980. There has been steady improvement since then culminating in a gold medal at the 1992 Olympics. The depth of performances also improved in 1992 with two placings in the top five.

Team

Results in the teams competition have followed a similar pattern to the individual results. There was a minor decline in performance in 1984 (from third to fifth) followed by a sharp improvement in 1992 which resulted in a gold medal.
World Equestrian Games

Individual

The above graph illustrates individual Australian performances in Olympic disciplines at the World Equestrian Games which were first held in 1990. Events such as driving, vaulting and endurance riding have been excluded from the graph as they are not part of the Olympic program. Performance levels at the two World Equestrian Games held to date have been highly consistent in terms of the highest-placed Australian and the depth of results, with a slight improvement in both in 1994.

Team

There was a major improvement in teams results at the 1994 World Equestrian Games with Australia achieving a fourth placing in the teams three-day event.
Factors affecting international competitiveness

The following factors were identified by the Equestrian Federation of Australian as relevant to Australia's international competitiveness:

- geographical isolation from the main centres of the sport is the key factor which affects Australia's performances at international events. Most major competition is based overseas, predominantly in Europe, and the costs for horse and rider to compete are substantial. For example, a return trip for the horse alone will cost in the vicinity of $25,000 to $30,000;

- other factors such as the resources available in other countries, the support programs available in other countries and the need for Australians to compete out of season are also relevant to equestrian but of lesser importance than the problems associated with geographical isolation.
Between 1976-77 and 1988-89 funding to equestrian varied according to the international competition allocation each year. Grants to the Equestrian Federation of Australia only increased after the introduction of the "Next Step" program in 1989-90. While overall funding levels have generally been higher since "Next Step" there is some annual variation depending on the international competition support provided.

Link between funding and performance

There is a similarity between the general upward trend in performance levels over the past five years and the funding pattern to equestrian. During the period of increased support to equestrian the sport has achieved best-ever performance levels. Despite the similarity between funding and performance trends it is not possible to determine whether any direct relationship exists due to the presence of other international factors.
4.2.12 FENCING

Senior results

The above graph indicates that Australian performances at the Olympic Games declined considerably between 1976 and 1988 before improving in 1992. Results from the World Championships (as shown below) have been more consistent. Best placings from each event are located within a fairly small range. In years where representation is low it is possible that full results are not available.
Factors affecting international competitiveness

The following factors were identified by the Australian Fencing Federation as relevant to Australia's international competitiveness:

- Australia must qualify for major international competition through the difficult Asian zone;
- geographical isolation, which limits access to international competition;
- limited funding provided to the sport, which combined with Australia's geographical isolation prevents regular travel to international events;
- the limited international competition program denies Australian competitors the opportunity to accumulate World Cup points;
- a shortage of top level international coaching talent in Australia. The sport believes this can be overcome by the funding to be provided to fencing under the Olympic Athlete Program.
Funding to fencing has varied considerably since 1976. There has been considerable variation in grants provided to the Australian Fencing Federation as well as for international competition. The trend in funding has been more consistent since the introduction of "Next Step" in 1989-90 with a significant increase in the first year of the program followed by moderate increases in subsequent years. "Next Step" followed a decade of declining funding after Australia hosted a major international event in 1979-80.

Link between funding and performance

There is a strong similarity between the funding trend and the trend of performances at the Olympic Games - the low points occur at the same point, and the general downward trend up to and including 1988 is followed in both cases by an upward trend after 1988. Despite the clear similarity it is not possible to state that a definite relationship exists between funding and performance due to the levels of funding involved and the influence of other international factors.
The graph shows that for most of the past decade Australia has been either the leading nation or close to the leading nation in men's amateur golf in the Asia-Pacific region. Australia has won each of the Pacific Teams Championships to be held, which is a teams event involving Australia, Japan, New Zealand and Canada. Australia has also placed highly in the Asia-Pacific Teams Championships involving as many as 15 nations, winning on three occasions, including the two most recent events. In the World Amateur Teams Championships held every second year the Australian team has been quite consistent, placing within the top 5 on seven out of nine occasions since 1976. Australia did not compete in the 1982 event due to South Africa's participation in the tournament.
Factors affecting international competitiveness

The following factors were identified by the Australian Golf Union as relevant to Australia's international competitiveness:

- the sport has experienced considerable growth in the past decade, particularly in Europe, Japan and South-East Asia, which has increased the number of competitive countries at senior and junior tournaments. Many of these countries are also implementing large-scale development programs;

- the Australian system cannot compete with the college system in the United States, which remains the world's leading "player school" and offers full support and high level domestic competition opportunities for selected players (enabling them to retain their amateur status);

- although a high quality competition program does exist in Australia, elite amateur players are still disadvantaged by Australia's geographical isolation which prevents easy access to high level international competition. Opportunities for competition are far better in Europe and the United States;

- Australia has some of the world's best golf courses, offering facilities the equal of any other country;

- the standard of golf coaching is an important part of the development of elite players and has been a major contributor to the high standard of performances over the past decade;

- Australia is one of the world's leading nations in professional golf, which is an indicator of the success of the range of programs conducted at the amateur level (and also a source of role models for amateur players);

- the impact of national and State institute of sport golf programs has increased the level of support and opportunities available to leading amateur golfers in Australia.
Australian Sports Commission funding to Men's Amateur Golf

There had been no allocation to men's golf under the National Sports Program prior to 1987-88 and no funding under the Australian Athlete Scholarship Scheme before 1989-90. Grants paid to the Australian Golf Union have increased although not significantly, the main reason for the funding increase in 1991-92 being the establishment of an AIS golf program in Melbourne.

Link between funding and performance

Australian amateur golfers have historically achieved high levels of performance, which makes it difficult to draw any strong conclusions regarding a link between ASC funding and international results. Another reason why drawing conclusions is difficult is that prior to the introduction of the AIS golf program most of the funding to men's amateur golf was directed below the elite level for development programs. Since the AIS program has been operating international results have obviously been more consistent. Australian teams have won the past two Asia Pacific Championships after winning just one of the previous five tournaments, and also maintained an unbeaten record in Pacific Teams Championships. Australia also returned to the top four at the World Amateur Championships.
4.2.14 GYMNASTICS

Artistic gymnastics

Women's teams

[Graph showing placing over years]

Australia has made a dramatic improvement in women's teams competition, improving from 23rd in 1983 to 16th in 1989 and on to sixth at the 1991 World Championships. Significantly, the team was able to maintain that high performance level at the 1992 Olympics, dropping only one place to seventh. Remaining in the top 10 in the world is likely to become more difficult with the political changes in eastern Europe which will result in more countries fielding strong gymnastics teams.
The graph highlights major improvements that have occurred in women's individual performances. Prior to 1994 results had improved significantly, to the point where in 1991 and 1992 the top five and four gymnasts respectively achieved higher placings than the best performed gymnast only five years earlier. The highest placed gymnast at the Barcelona Olympics finished 60 places higher than the leading Australian gymnast in 1976. Performances declined at the 1994 World Championships, due mainly to an injury to Australia's current leading gymnast and the retirement of several senior gymnasts after the 1992 Olympics. Australia was not represented at the 1993 World Championships.
Men's teams

There has been little change in results in the men's teams event, placings ranging between 19th and 21st from 1979 to 1989. Australia has not qualified for the men's teams event at the Olympic Games.

Men's Individual

Men's individual performance levels fluctuated between 1978 and 1991 without showing any sustained improvement. At the three most recent events (1994 and 1993 World Championships and 1992 Olympics) results have improved, representing the most sustained period of improvement over the last 18 years. The depth of performances has also improved in the last two years.
Rhythmic gymnastics

The Four Continents Championships is a rhythmic gymnastics event held every two years involving the four continents outside Europe and provides a consistent measure of Australia's international competitiveness against the participating countries. At the 1994 event there were representatives from 13 countries including the United States, Canada, Japan, China, Korea and some of the new Soviet republics. Following a decline in performance levels in 1988 and 1990, Australian results have improved at the two most recent events. The Australian results from the 1994 Four Continents Championships were the highest since the tournament's inception.
Factors affecting international competitiveness

The following factors were identified by the Australian Gymnastics Federation as relevant to Australia's international competitiveness:

- gymnastics generally has a higher profile in overseas countries;
- the political changes in eastern Europe, including the breakdown of the former Soviet Union, have provided a new environment with both positive and negative consequences for Australia. The events in eastern Europe have reduced the domination of the former Soviet Union in gymnastics, but the individual competition has been flooded with representatives from the former Soviet states, now eligible to compete for their own countries. This has led to a situation where there are now more high level competitors participating in major events;
- there is more commercial support available for gymnasts and programs in major competing countries;
- there is an effective infrastructure in many overseas countries based on the school, college and university systems;
- major competing countries have far higher participation bases to draw from;
- sophisticated talent identification programs have operated in many countries over a long period. In contrast, Australia's talent identification program has been operating for a short time only;
- many of the major competing countries have traditionally viewed gymnastics as part of their culture and, therefore, have considered it fundamental to strongly support gymnastics programs;
- reports in the media have indicated that some countries, particularly the former Soviet Union, have adopted training regimes for the women's program that would be unacceptable in Australia. While this cannot be substantiated, there is also a view that the practices referenced in reports may also reflect those adopted in other eastern European countries;
- subjective evidence suggests that in the late 1970s and early 1980s growth retardants were used in other countries. The use of diuretics has been found in rhythmic gymnastics;
- accusations of judging bias at major international events have been made on many occasions. A system has been introduced which monitors the marks given by individual judges, which is believed to have had a significant impact in making competitions fairer;
- the host Olympic country invests heavily in its gymnastics program for the Games it is hosting. This has been particularly noticeable at the last two Olympics, in Korea and Spain, where these countries that were not previously among the world's best showed considerable improvement.
Gymnastics was one of the original sports admitted to the AIS. Funding to gymnastics followed the general pattern of sports funding - a steady increase in the first half of the 1980s followed by a levelling off of funding and a decline prior to "Next Step" in 1989-90. Following the introduction of "Next Step", funding increased for international competition, there was greater support under the National Sports Program and an Intensive Training Centres program was established. In the last evaluation the Australian Gymnastics Federation reported that it had targeted the women's artistic program from 1986 which impacted negatively on the men's program. The men's program now receives a greater share of funding.

**Link between funding and performance**

There is a similarity between the funding trend and performance trend in gymnastics in that they are both moving in an upwards direction. Funding increases and performance improvements do not occur at the same time, mainly because of the lengthy development process involved in training international gymnasts, which delayed any significant improvement in results until the early part of the 1990s. It is also significant that men's results have improved in the last three years following a decision to allocate more resources to the men's program. While there appears to be a clear relationship between changes in funding levels and improvements in international competition, it is not possible to determine the strength of any such relationship.
4.2.15 HANDBALL

International results

Australia has had a very limited international competition program in handball, with major international matches only commencing two years ago. For this reason it is not possible to prepare any sort of time series analysis of international handball results.

In 1992 Australia was invited to participate in the Asian Championships (due to the lack of competition in the Oceania region). Australia finished on top of its pool of teams but was not permitted to progress to the next stage of the competition (the final eight) because of its status as a "guest country".

Australia is one of three countries from the Oceania region affiliated with the International Handball Federation. Unfortunately, a minimum of five countries is required for a region to earn a representation at Olympic Games and World Championships. As a concession from the international body, the Oceania region champion (currently Australia) now has the right to play the lowest qualifying European team for a World Championship berth.

Factors affecting international competitiveness

The following factors were identified by the Australian Handball Federation as relevant to Australia's international competitiveness:

- handball has a very short history in this country, with Australia only admitted to the International Handball Federation in 1984. Australia was not involved in any sanctioned international participation before that date;

- historically there has been very limited government funding to handball for any programs;

- there is a restricted qualification path for the men's team to qualify for major international events (as described previously), and there is no qualification path for the women;

- Australia's geographical isolation has contributed to the lack of international competition opportunities;

- the number of handball venues in Australia and the amount of suitable equipment is limited;

- many of the major competing countries, particularly in Asia and Europe, have professional or full-time handball programs.
Funding to handball has been limited until recent years. It was not until the introduction of the "Next Step" program that annual funding to handball climbed above $10,000. In the last five years funding has increased considerably (although overall levels are still relatively low), with greater international competition and National Sports Program support as well as continued assistance to the Australian Handball Federation.

Link between funding and performance

Given the levels of support provided to handball in the past and the sport's limited international competition program, it is not possible to establish any link between ASC funding and performance.
4.2.16 HOCKEY

Men

Australia has been extremely consistent in international men's hockey, finishing no lower than fourth in 23 world-level events since 1976. At the beginning of the period shown above Australia was one of the world's best hockey nations, and this level of performance has been maintained through to the present. There have been some particularly noteworthy achievements in that time, including two Olympic silver medals (1976, 1992), a World Cup triumph (1986) and victory in six Champions Trophy tournaments.
Women

Results achieved by the Australian women's hockey team are similar to those for the men, although slightly less consistent in the earlier years. Overall, however, the results are still of a very high standard with the lowest placings being a fifth at the 1992 Olympic Games and sixth at the 1986 World Cup. With the exception of the result in Barcelona, the Australian team has maintained a very impressive record since 1987, finishing either first or second at every major world tournament. Highlights for the team during this time have been gold medals at the Seoul Olympics in 1988 and in the 1994 World Cup, and Champions Trophy victories in 1991 and 1993.
Factors affecting international competitiveness

Men

The following factors were identified by the Australian Hockey Association as relevant to Australia's international competitiveness:

- Australia does not have the ability to access the same number of international games as major competing countries;

- Australia is unable to spread its competition program over a longer period. Instead, the team is forced to cram its international matches into a few short periods;

- Australia is unable to attract top nations to compete in Australia because of the comparative costs of obtaining the same standard of competition elsewhere;

- the Australian team is unable to effectively "scout" opposition teams both in a technical and developmental sense;

- there is a lack of appropriate video materials and equipment;

- the Australian team is unable to train as a full group on a consistent basis due to geographical location;

- Australia is unable to access the junior and youth competitions that are available to major competing countries;

- Australia has a lack of the soft slow surfaces that suit Australia's style of play (surfaces laid within the last 18 months). Most artificial surfaces in Australia are much older which means Australian teams need to adjust when playing in major tournaments (which are generally played on a new surface);

- countries such as Pakistan, Korea and India operate on a professional basis, while the Netherlands and Germany have player incentive schemes. Most of Australia's major competitors have resources which allow a more professional approach and greater support staff than Australia.
Women

The following factors were identified by the Australian Women's Hockey Association as relevant to Australia's international competitiveness:

- it is difficult for Australia to entice other leading nations to Australia for competition due to the high cost of travel, compared to more accessible, cost effective and high standard competition elsewhere;

- it is difficult for Australia to provide international youth competition due to distance and associated cost factors;

- Australia's national coaches are unable to scout overseas to gain an understanding of the tactics, techniques and development of other nations;

- the level of professionalism of support staff is very high in Australia;

- the coaching structure of the sport in Australia has been reviewed which will lead to a more effective system.
Funding is provided to separate organisations for men's and women's hockey. The above graph (men's hockey) is very similar to the graph below (women's hockey) and is marked by three distinct stages of funding. The first stage, from 1977-78 to 1982-83, saw funding predominantly provided for the national sporting organisation and for international competition. In the second stage, from 1983-84 to 1988-89, there was an initial funding increase as a result of hockey's admission to the AIS, although funding levels did decrease in 1987-88 and 1988-89, particularly for the men. Following the introduction of "Next Step" in 1989-90 there was a further substantial increase marked by greater assistance under the Australian Athlete Scholarship Scheme and the establishment of an Intensive Training Centres program for hockey. Funding to the national sporting organisations for men's and women's hockey has also increased slightly.
Link between funding and performance

Given the consistently high performances achieved by Australian men's and women's teams over the period from 1976, it is difficult to establish a direct link between funding to hockey and international performance. Both the men's and women's teams started with a high "base" level with limited scope for improvement in terms of placings. There is some evidence, based on the performance graph, that results in women's hockey have been more consistent in the past five years at a time when funding to the sport has significantly increased. With the exception of the 1992 Olympic Games, the Australian women's team has finished either first or second at every major international tournament since 1987. For most of this period (1989 onwards) there have been substantial funding increases to women's hockey across all areas.
4.2.17 ICE SKATING

Olympic Games

There has been little change in the performances of Australian ice skaters in Olympic Games since 1976. Representation in ice skating events has improved, with Australia participating in one event in 1976 and 1980 but in at least two events for each subsequent Games. For each discipline results have been reasonably stable - improved slightly in the men's, steady in the pairs and declined in the ladies where Australia was last represented in 1988.

World Championships - Mens and Ladies

Results in the men's category improved significantly until 1991 but have since declined at a steady rate, returning to levels similar to the mid-1980s. Ladies results have been mixed, improving until 1987 but declining at an uneven rate in the following years.
World Championships - Pairs and Dance

Pairs results remained relatively stable between 1984 and 1993, while results in dance have declined over the same period.

Juniors

Results at the World Junior Championships have been varied. In the men's category, Australia achieved a best-ever fifth placing in 1985, however results fell by more than 25 placings between 1985 and 1994.
In the junior ladies category, Australian representatives placed between 21st and 24th on five out of the first six occasions, the exception being an improvement to 16th place in 1987. Recent results (1993 and 1994) have shown a significant decline.

Australia has not been represented in the pairs event since 1985 and the dance since 1987.

Factors affecting international competitiveness

The following factors were identified by the National Ice Skating Association of Australia as relevant to Australia's international competitiveness:

- ice skating is a medium profile sport with a low level of competitive participation in Australia;
- in order for Australian skaters to gain a higher standard of competition, they must travel and compete internationally;
- the lack of financial resources available is considered to have limited the number of international skaters Australia has produced;
- Australia has a lack of international standard facilities;
- facilities and training programs in many other countries are superior to those available in Australia;
- the NISAA has no permanently appointed national coaching director;
- there are only 16 ice rinks in Australia and of these, 10 are full size;
- there are few employment opportunities available for ice skaters once they retire from competition. As a result, competition for places in ice shows and as coaches is very strong;
- elite skaters need to treat the sport as a full-time occupation (which can be done in other countries but not Australia);
- the development period for an elite ice skater is approximately 8-10 years, similar to that for an international standard gymnast. Access to all professional services (sports science and medicine, quality coaching, etc) is necessary throughout this time;
- the manoeuvres attempted in international ice skating are becoming more and more difficult. It is difficult for Australian skaters to keep up with all international developments because of Australia's geographical isolation and the profile of the sport in this country.
Australian Sports Commission funding to Ice Skating

Funding to ice skating has varied from year to year but has increased overall (although levels have declined considerably in the last two years). The main determinant of overall funding levels has been support for international competition, although since 1989-90 funding to the National Ice Skating Association of Australia has also increased. The major component of international competition funding in 1987-88 went towards the 1987 World Junior Championships, which were held in Australia.

Link between funding and performance

Given the international factors identified earlier, the annual variation in funding provided to ice skating and the relatively low funding levels prior to 1991-92, it is difficult to identify specific links between funding to the sport and international performances. There is some similarity between funding and performance trends, however, in that men's and ladies' World Championships results declined in 1988 at a time when funding to ice skating was at its lowest point in five years. Men's results have since improved since the introduction of "Next Step" funding, while ladies' results have continued to decline. At the junior level performances since 1992 have declined in a manner similar to the sport's overall funding levels. It is the opinion of the NISAA, however, that "improved funding leading up to the 1992 Olympic Winter Games with a flow-through effect to 1994, appears to have resulted in consistent performance improvement at Olympic and World Championships events".
4.2.18 JUDO

Olympic Games

Prior to 1992 women were not part of the judo competition at the Olympic Games. Judo was a demonstration sport for women in 1988 but only achieved medal status four years later.

The judo competition is conducted on an elimination basis, and the table below refers to the stage of the tournament that Australian representatives were eliminated. Women's results are included for 1992 (the results of the demonstration event are not included).

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The above table shows that there has been virtually no change in Australian judo results at the Olympic Games since 1976. The majority of Australian competitors have been eliminated after the first round of the tournament. Since 1976 no Australians have progressed to the third round of the competition.

World Championships

World Championships results are available dating back to 1985. Australian representatives have failed to progress past the second round in any of these tournaments.
Factors affecting international competitiveness

The following factors were identified by the Judo Federation of Australia as relevant to Australia's international competitiveness:

- other major competing countries have larger participant bases and greater financial resources. Consequently the judo programs in these countries are generally of a higher standard;

- funding to judo is not sufficient to provide an adequate preparation for international competition (although the sport believes this will be overcome by funding under the Olympic Athlete Program);

- Australia's geographic isolation, which results in a lack of international competition opportunities and exposure to international competition;

- Australia has to qualify through the difficult Asian zone for Olympic Games and World Championships;

- the lack of administrative support in the Federation's front office and the lack of a fully funded national training centre.
Grants to the Judo Federation of Australia has comprised the bulk of the total funding to judo since 1984-85. Since that time funding has varied in a wave-like cycle according to the international competition allocation in each year. There has been no significant change to the funding pattern for judo since the introduction of "Next Step" in 1989-90.

Link between funding and performance

There has been little change in Australia's judo results since 1976 while funding to the sport has varied annually in a cyclical fashion. As a result it is difficult to identify any direct link between funding to judo and the sport's international performances. Overall funding has been relatively low and is one of the potential factors limiting the sport's international results, as it has restricted the scope of projects the sport has undertaken.
4.2.19 MODERN PENTATHLON

Senior results

The above graph shows the individual performances of the Australian men’s team at Olympic Games since 1976 (there is no women's modern pentathlon on the Olympic program). There is no result recorded for the 1988 Olympics because the Australian athlete was disqualified at this event.

Australian performances at the Olympic Games have been consistently improving. The exception is the 1984 results, where the performances higher than the general trend may have been influenced by the boycotts in that year. The 1984 result exaggerates the trend of improving results between 1976 and 1992.

The graph below, which includes men's and women's World Championships performances, highlights a different trend. Results have varied from year to year, declining significantly from 1986 to 1990, but rising steadily again in recent years. The highest ever placing by an Australian at a World Championships was achieved in 1994.
Factors affecting international competitiveness

The following factors were identified by the Australian Modern Pentathlon Union as relevant to Australia's international competitiveness:

- there is a low participant base for some elements of the sport, most notably fencing and riding. Some athletes do not take up these sports until they are 18 years of age, far older than is normal in other countries. It is believed Australia lacks quality coaching in fencing, the sport which for Australia is historically the weakest of the five sports in the modern pentathlon;

- it is believed that until recently drug taking was an issue in the sport, although concerns in this area have now decreased;

- other major competing countries have far better resources and programs. Some countries have centres of excellence which cater for full-time modern pentathlon programs, similar to the AIS and funded by the government;

- the profile of the sport is much higher in other countries and as such a modern pentathlon champion is the "ultimate champion";

- limited funding is available in Australia for preparation and participation in international competition. This disadvantages Australian athletes who have to pre-qualify for major championships at other international events (the alternative method of qualifying is for Australia to host an event which at least five countries must attend);

- Australian athletes are frequently required to compete "out of season" at major international events;

- the Australian Modern Pentathlon Union is unable to send coaches and administrators overseas to monitors the latest trends.
Overall funding to modern pentathlon is largely determined by the amount provided for international competition, although funding in other areas has also varied from year to year. Since the introduction of the "Next Step" program in 1989-90, funding levels have been higher overall although there has still been some annual variation.

**Link between funding and performance**

While it is not possible to draw any conclusions regarding a direct link between funding and performance, there is a strong similarity between the pattern of funding provided to modern pentathlon and the results from World Championships. Peaks and troughs in performances coincide with highs and lows in funding levels, most notably between 1986 and 1990. The subsequent funding increase to modern pentathlon has also coincided with improvements in international performances.
4.2.20 NETBALL

Major international results

Netball - International results since 1976

Netball has been one of Australia's most consistently successful international sports. The Australian team has dominated international netball events, finishing no worse than second at any major international tournament. Australia has won three out of the four World Championships to have been held since 1976, as well as the inaugural World Youth Cup.
Factors affecting international competitiveness

The following factors were identified by the All Australia Netball Association (AANA) as relevant to Australia's international competitiveness:

- the number of countries affiliated with the International Federation of Netball Associations is increasing. Most of the new affiliates are African countries;

- it is hoped that the inclusion of netball onto the program for the 1998 Commonwealth Games will see an increase in the support the sport receives in other Commonwealth nations, and a subsequent improvement in playing standards;

- netball, one of Australia's main participant sports, is not eligible for Olympic Athlete Program funding. There is a perception by some people in the sport that there would be greater financial advantage for athletes to take up a low-participation, high-funded Olympic sport rather than continue playing netball at a high level;

- a reduction in funding to netball under the Australian Athlete Scholarship Scheme has financially disadvantaged some players;

- recent defeats at the World Youth Cup and in one test match in 1994 indicates that New Zealand is still highly competitive with Australia at senior and youth levels;

- the quality of officiating at major international events needs to be improved.
Netball was one of the original sports admitted to the AIS. Funding increased steadily for most of the 1980s due mainly to increases in funding to the AIS netball program and to the AANA. Since the introduction of the "Next Step" program in 1989-90 there has been a further significant increase in funds, with greater support for international competition and under the Australian Athlete Scholarship Scheme. Funding to the AANA has also increased in recent years. Total funding levels have been stable over the past two years at a time when many sports have experienced decreases in funding.

**Link between funding and performance**

As Australian teams have finished either first or second at every major international senior and junior event since 1976, it is difficult to establish any specific links between netball's funding trends and the sport's international performances during this time. It is reasonable to assume, however, that assistance in areas such as coaching, talent identification and elite player development have contributed significantly to Australia's maintenance of its premier position in world netball.
4.2.21 ORIENTEERING

Women

Results have been generally consistent throughout the period, with best performances ranging from 36th in 1993 to 17th in 1985. Performances have been much less varied over the last four championships, with best results of 27th, 26th, 25th and 36th. The depth of performances has declined slightly over the entire period.

Men
Between 1976 and 1987 men's World Championships results reflected a similar pattern to the women's results, with very little change in the level of best performances or in the depth of performances. At the 1989 event the best performance declined by 20 places, and results have remained close to this level at the two subsequent events in 1991 and 1993.

Senior relay

![Orienteering: Senior relay - World Championships graph]

Best results for both the men's and women's teams were sixth placings at the 1981 World Championships. Results for both teams declined after that event until 1989 and have been more stable at recent events.
Junior women

Orienteering: Junior women - World Championships

Performances have shown an upward trend with best results improving by more than 50 placings between 1989 and 1994. Prior to 1994 there had also been improvement in the depth of performances over the same period.

Junior men

Orienteering: Junior men - World Championships

The graph shows a significant improvement in the best performances at World Junior Championships, from a 71st placing in 1989 to 4th placing in 1994. The depth of performances has remained relatively stable between 1990 and 1994.
Factors affecting Australia's international competitiveness

The following factors were identified by the Orienteering Federation of Australia as relevant to Australia's international competitiveness:

- Australia's geographic isolation greatly reduces access to regular top level international competition due to the time and financial commitment involved. In Australia orienteering is very much an amateur, part-time sport with the majority of senior competitors being professional or semi-professional people who can afford to compete;

- orienteering has a much higher profile in countries such as Norway and Sweden, where competitors are high class long distance runners in their own right. These countries also have access to AIS-style sports colleges offering high standard coaching. In recent years Australian juniors have spent time at these facilities and as a result their performances in international competition have improved;

- Australia has a low participation base in comparison to major competing countries;

- other competing countries have a far greater level of resources available to them for their national program;

- the economic problems faced by countries formed by the political changes in eastern Europe means that these countries are unlikely to support any Australian bid to host major events without some sort of financial incentive (cheap air fares, accommodation, etc). Problems with geographical isolation are set to continue if Australia is unable to host major events;

- an Australian Orienteering League was successfully launched in 1993 to provide high quality local competition among elite athletes. Continuation of the league will see younger elite athletes gain high level local competition experience before embarking on overseas tours.
Funding provided to orienteering has varied considerably from year to year, and total annual amounts have been small compared to many other sports. Typical of many sports with similar allocations, the major determinant in the overall funding level is the amount provided for international competition. The three highest funding years, 1981-82, 1983-84 and 1991-92, were all tied to occasions when Australia hosted a major international event such as the World Championships in 1985 and the World Veterans Championships in 1992. Only once has funding been provided under the Australian Athlete Scholarship Scheme.

Link between funding and performance

It is not possible to determine the extent of any relationship between funding to orienteering and international performances, given the low levels of support provided to the sport and the nature of that support (international competition funding but no development/athlete programs), as well as the presence of other international factors.
4.2.22 ROWING

Senior rowing (heavyweight) - Olympic Games and World Championships

The above graph highlights two trends in senior Australian rowing - a significant improvement in performances since 1976 and an increase in the number of high level performances by Australian rowers. In the period 1976 to 1989, senior Australian rowers had won five medals at Olympic Games and World Championships (one gold, one silver and three bronze), three of which came at the 1984 Olympics which were affected by the boycott by the powerful Eastern Bloc nations. In the five years from 1990 to 1994 Australia won nine medals at this level, four them gold. In addition to a greater number of medallists, the graph also indicates that more crews are qualifying for event finals (top six). The 1994 World Championships marked the first occasion since 1984 that an Australian team had won three medals at the one event.

Senior rowing (lightweight) - World Championships
While Australia has enjoyed some degree of success in lightweight rowing during the 1980s, the graph demonstrates that results since 1990 have been at a consistently higher level than at any time previously. The 1991-1993 period represents the first time that Australia has won lightweight gold medals at three consecutive World Championships, while in 1994 performances declined to some degree although the number of finalists was still quite high. In 1992 Australia won two gold medals at the one event for the first time. Lightweight rowing events have been added to the Olympic program at the 1996 Games in Atlanta.

Junior rowing - World Championships

The above graph shows the number of finalists (top six placings) at World Junior Rowing Championships. What is immediately apparent is the improvement in performances by Australians, and the major increase in the number of finalists over the period. Results have improved consistently since 1986, culminating in one gold and three silver medals in 1992, one gold, one silver and one bronze medal in 1993 and one gold and two bronze medals in 1994. Having won just one gold medal at the nine events prior to 1992, Australia has now won a gold medal at each of the past three World Junior Championships.
Factors affecting international competitiveness

The following factors were identified by the Australian Rowing Council as relevant to Australia's international competitiveness:

- talent identification programs have been in place in former Eastern Bloc countries for a much longer period of time than in Australia;

- many other countries, particularly in Europe, have had intensive development programs in place for over 20 years. Australia has attempted to emulate these and has imported expertise through overseas coaches visiting or residing in Australia and appointed in the coaching network;

- lightweight rowing has become more competitive since it was admitted to the program for the 1996 Olympic Games;

- the ARC did not consider drugs to be an issue in rowing. Strengthened drug-testing regimes are considered to have contributed to keeping the sport relatively drug-free;

- some overseas countries have "vast" amounts of sponsorship money for use in rowing programs;

- there are currently 75 nations competing in rowing, and this number is expected to increase;

- most other countries have wider participation bases than Australia, therefore, their talent base has been wider. Australia's participation base has been widening as a result of the talent identification program introduced in the late 1980s and the success in international competition of Australian crews. There has also been greater retention of rowers through to the elite levels because of ASC-funded programs and increased levels of school competitions; and

- the increase in the number of countries caused by the break-up of the former Soviet Union has resulted in stronger international competition.
Funding to rowing increased substantially in 1989-90 under the "Next Step" program. An Intensive Training Centres program for rowing was introduced, greater assistance was provided under the Australian Athlete Scholarship Scheme and the National Sports Program, and funding for international competition and for the AIS rowing program were also increased. Grants to the Australian Rowing Council have remained relatively stable during this period.

Link between performance and funding

The overall trend of the funding provided to rowing is similar to the pattern of international performances over the same period. The improvements across all areas of rowing - heavyweight, lightweight and junior - has coincided with the substantial funding increases which began under the "Next Step" program in 1989-90. It is also interesting to note that performances in lightweight and heavyweight rowing at the 1994 World Championships were slightly lower in terms of the highest placing, at a time when there has been a marginal decrease in the funding provided to rowing. Despite the presence of the trend similarities and the appearance of a relationship between funding and performance, it is not possible to determine the strength of any such link due to other international factors.
4.2.23 RUGBY UNION

Test Match results

Although Australia’s international rugby union results have varied from year to year, depending to some extent on the quality of the opposition faced, in general performances have improved. The highlights during this period were Australia’s World Cup triumph in 1991, when the team went through the tournament without losing a match, and the 1994 season when the Australian team was undefeated. The graph shows that in recent years the number of games played each year has increased and that the period from 1991 to the present can be considered the Australian team’s most successful phase in terms of matches won.

Results have been graphed this way because of the differing frequency of test matches and the variation in countries competing in test matches. The World Cup, which is held every four years, was only introduced in 1987. Australia placed fourth in that year and won the event in 1991.
Australia's international performances are currently at their highest ever level in terms of the percentage of matches won each year. Results from the 1994 test match program represents the first time an Australian team has remained undefeated for the year. Other highly successful periods for the national team have been 1980 and 1984-86.

The winning percentage may be influenced by matches against lower-ranked opposition, although Australia has a reasonably consistent international schedule against the member nations of the International Rugby Board. There is at least one match a year against New Zealand (generally regarded as Australia's toughest opponent), as well as a regular home and away cycle against the other major rugby playing nations, which once again includes South Africa.
Factors affecting international competitiveness

The following factors were identified by the Australian Rugby Football Union as relevant to Australia's international competitiveness in rugby union:

• the limited number of places available on the national team at any one time and the potentially lengthy international careers of senior players can inhibit the progress of emerging players through to the senior team. At the same time, it is also necessary to develop a strong pool of talent to ensure that when changes to the team are necessary there are suitable replacements available who have been groomed to play at the highest level;

• many of Australia's main international competitors have greater participation bases and financial resources available to them;

• a lack of government support for the national senior team at a time when international rugby is becoming more competitive;

• the reintroduction of South Africa to international rugby provides an additional source of quality competition;

• rugby union benefited from the support of the Rothmans Foundation from 1974 until its closure in 1994. Work through the Rothmans Foundation allowed coaching techniques to be continuously improved at all levels, to the point where the ARFU's coaching network is acknowledged as one of the world leaders in the sport;

• there are now greater opportunities for players to represent Australia at all levels, from senior teams (Wallabies and Emerging Wallabies), to under-21 and schoolboy teams. The increase in opportunities is believed to have influenced the sport's player base by giving more players a chance to play at the representative level;

• rugby union has utilised sports science and sports medicine methods to improve performance and has made this information available at all levels in the sport. The national team has adopted the same principles as the AIS rugby program to ensure a consistent approach throughout the elite program;

• an emphasis on junior development in rugby has resulted in a nationally co-ordinated approach at the introductory and developmental levels of the sport;

• the growth of women's rugby, including the establishment of an international program for the national team, has placed an additional burden on resources (a small amount of funding was provided to the ARFU by the Australian Sports Commission to assist in the establishment of a women's rugby program);

• improved officiating standards have also contributed to the improvement in performance levels.
Australian Sports Commission funding to Rugby Union

The above graph indicates that funding to rugby union only changed significantly following the introduction of the AIS rugby program in 1988-89. There was a further increase in funding in 1990-91 which was caused mainly by the first significant allocation to rugby under the Australian Athlete Scholarship Scheme. Grants to the Australian Rugby Football Union have also increased over the last three years. Funding for international competition is low, being limited mainly to schoolboy and youth teams.

Link between performance and funding

While it is not possible to draw definite conclusions about any link between AIS funding to rugby union and the international performances of the Wallabies, it is apparent that periods of high funding (1989-90 to the present and 1984-85 to 1986-87) have coincided with sustained periods of high performance. The establishment of the AIS rugby program in 1988-89 marked a significant point for rugby union in Australia as the catalyst for the introduction of a co-ordinated national approach to talent identification and development and for the utilisation of the sports sciences. ASC funding has contributed to the improvement in Australia's performances at a time when the sport is getting stronger internationally.
4.2.24 CLAY TARGET SHOOTING

Individual results

Points along the horizontal axis refer to placings outside the top 24 (not necessarily 25th place). In some events there is a preliminary stage to determine the top 24 shooters to progress through to the medal round. A point along the bottom axis refers to a year in which Australia was represented at a World Championship or Olympic event but failed to qualify in the top 24.

The graph indicates that Australia's results in both the trap and skeet have been inconsistent throughout the period. While there have been a number of top 10 placings during this time (and three top three placings), there have also been many occasions where the best result has been outside the top 24. Results have generally been higher in the trap events than in skeet. In the newer events, the double trap and the double skeet, Australia has been more consistent, placing within the top 10 on all but one occasion with the highlight being a world championship in the double trap in 1994.
Teams results

Clay Target Shooting - World Teams Championships

The pattern of teams results is similar to the individual performances in skeet, where there are five placings inside the top 24 and four placings outside the top 24. Best performances in skeet are not as high as those for trap, where there are 10 placings in the top 24 (including seven in the top 10) and only one result outside, which occurred back in 1979. Teams trap performances have been more consistent than individual trap results. Placings in the double trap have been high on each occasion.
Factors affecting international competitiveness

The following factors were identified by the Australian Clay Target Association as relevant to Australia's international competitiveness:

• geographical isolation, resulting in fewer international and high level competition opportunities. Shooting in all disciplines is predominantly European-based, with most of the remaining events of any significance being held in North and South America;

• a circuit of five World Cup events is held in Europe and the Americas. A lack of resources prevents Australian shooters from attending these events, which results in less opportunities to obtain Olympic minimum qualifying scores;

• the cost of participation is high. Athletes that have been successful in the past have generally been those that have been able to fund their own competition schedules. Australian representatives have been endorsed by the ACTA in the past simply because they could afford to attend an event, rather than necessarily being the best representatives. Ammunition and other training expenses add to the cost of participating;

• major competing countries generally have superior elite athlete and coaching programs to Australia. The situation has improved in recent years although Australia is still below the standards of other countries.
Australian Sports Commission funding to Clay Target Shooting

There has been an irregular pattern to the funding provided to clay target shooting. There has been little change to the grants to the Australian Clay Target Association since 1979-80, with the variations in annual funding mainly related to the levels of support in the international competition and National Sports Program areas. Support under the Australian Athlete Scholarship Scheme has also varied according to the fluctuating performances of Australians at major events. The high points in total funding, 1989-90 and 1990-91, were the result of assistance provided towards Australia's hosting of the World Shotgun Championships in 1991 (paid in two instalments).

Link between funding and performance

Australian performances in clay target shooting have varied greatly since 1976 without any particular pattern. While there have been regular placings within the top 5 at World Championships there have also been many occasions when results have fallen outside the top 24. The margin for error at international level is very small, and because of the individual nature of the sport, results tend to vary depending on availability, retirement, form, etc of a small number of elite athletes. Given these factors, the other international factors identified previously and the relatively low levels of funding provided to clay target shooting, it is not possible to determine any definite links between ASC funding and performance.
4.2.25 PISTOL SHOOTING

Olympic Games and World Championships

Olympic and World Championships results in pistol shooting have exhibited an upward trend, distorted to some extent by the results at the 1984 Games which were affected by boycotts (these Games produced Australia's only pistol shooting medal). Australia's improvement in pistol shooting at the highest level has been significant and consistent over a long period of time (assuming the results in 1984 were enhanced by the boycott). It appears that the trend towards improved performances has levelled off, although Australian shooters have still achieved a top 10 placing at each event since 1990. Australia was not represented in pistol shooting at the 1980 Olympic Games, and World Championships results prior to 1986 are unavailable.
Factors affecting international competitiveness

The following factors were identified by Pistol Australia as relevant to Australia's international competitiveness:

- there are no electronic targets in Australia (the cost of a complete set would be in the order of $1 million);

- Australia's geographical isolation results in fewer competition opportunities for Australian shooters, and prevents full participation in the annual World Cup circuit;

- there is a high cost involved in competing internationally, which further restricts the number of potential elite shooters.
Australian Sports Commission funding to Pistol Shooting

Relatively low levels of funding were provided to pistol shooting prior to the introduction of the "Next Step" program in 1989-90. Funding increased under "Next Step", particularly in 1990-91 and 1991-92 when higher than normal levels of international competition support were provided. In the last two years funding has declined with the reduction of international competition assistance.

Link between funding and performance

There is some degree of similarity between the funding provided to pistol shooting and the sport's international performances. The high point on the results graph (1984 - which was probably boycott-related) is also the point of the first significant increase in funding to pistol shooting. Funding and performance levels both declined after this point. In more recent years, the upward trend in performance levels appears to have "levelled off" at a time when funding to pistol shooting has declined. Despite these similarities, however, it is not possible to determine the extent of any relationship between funding and performance due to the presence of other international factors.
4.2.26 RUNNING TARGET SHOOTING

Olympic Games and World Championships

The best Australian placing occurred at the 1984 Olympic Games and results have fluctuated at each subsequent event. Results at the Olympic Games (1984 and 1988) have been higher than for the World Championships (1986 and 1990). Australia was not represented in the running target at the 1992 Olympic Games, and results from the 1994 World Championships are currently unavailable.

Factors affecting international competitiveness

The following factors were identified by the Sporting Shooters Association of Australia as relevant to Australia's international competitiveness:

- Australia’s geographical isolation limits international competition opportunities and contributes to high costs for competing internationally;

- there is a lack of suitable and readily accessible local facilities to attract new shooters to the sport;

- major competing countries generally have superior elite athlete and coaching programs to Australia.
Australian Sports Commission funding to Running Target Shooting

Running target shooting has received low levels of funding, with total amounts in all years being under $30,000. The bulk of funding has been for national sporting organisation grants and for international competition, with only occasional support under the National Sports Program and the Australian Athlete Scholarship Scheme.

**Link between funding and performance**

Given the limited level of funding provided to running target shooting and the present unavailability of results from the 1994 World Championships, it is not possible to determine the existence of any link between funding and performance.
4.2.27 SMALLBORE SHOOTING

Olympic Games

Olympic smallbore results exhibited an upward trend between 1976 and 1988, with a highest placing of 11th at the Seoul Games. There was a sharp improvement at the Moscow Olympics in 1980 in terms of the best-placed Australian as well as the depth of performances, and these levels have been maintained at subsequent Olympics. It is significant that performance levels were maintained in Seoul as the previous two Olympics were significantly affected by boycotts. Australia was not represented in smallbore at the Barcelona Olympics in 1992.

World Championships
Performances at the 1990 World Championships declined after exceptional results were achieved in 1986 (one gold and one silver medal). It is considered that problems encountered on the trip to Moscow for the World Championships contributed to the lower level of performances in 1990. This pattern of fluctuating international results (including some very high placings) is consistent with other shooting sports and indicates that the sport does not have sufficient resources to enable elite programs to be developed to the level necessary for more consistent high level placings to occur.

Individual results prior to 1986 are currently unavailable, although some team results have been provided. The Australian women's team won a gold medal in the 50 metre event at the 1982 World Championships, and a bronze medal at the 1978 Championships.

**Factors affecting international competitiveness**

The following factors were identified by the Australian Smallbore and Air Rifle Association as relevant to Australia's international competitiveness:

- there is a lack of suitable and readily accessible local facilities to attract new shooters to the sport;

- there are no electronic targets available in Australia;

- Australia's geographical isolation limits international competition opportunities and contributes to high costs for competing internationally.
Funding to smallbore rifle shooting has increased over the period although overall funding amounts have remained low. Since the introduction of the "Next Step" program in 1989-90 the main area to increase has been the National Sports Program. Funding has subsequently declined since 1989-90 with limited support for international competition and under the Australian Athlete Scholarship Scheme.

Link between funding and performance

Given the limited level of funding provided to smallbore rifle shooting, as well as the present unavailability of results from the 1994 World Championships, it is not possible to determine the existence of any link between ASC funding and performance.
Alpine skiing - men and women combined

Results in alpine skiing showed steady improvement between 1976 and 1987 in terms of best performances and the depth of performances. Since 1987 results have tended to decline until by 1994 they had returned to levels similar to 1976. With the exception of 1993, best performances have been considerably higher in World Championships (1987, 1989, 1991) than in Olympic Games. When a smaller number of performances are recorded in a particular year, this may relate to an athlete failing to complete the course (which is reasonably common in alpine) rather than a smaller team size or a lack of depth.
Cross-country skiing - men and women combined

Cross-country skiing (up to 30km) - World Championships and Olympic Games

Cross-country events have been separated into shorter and longer distances, as competitors tend to specialise in one or the other. In the above graph, Australia's results varied considerably during the 1980s but have been more stable in recent years. Performance levels are currently similar to the levels in 1976 although slightly lower.

In the longer events shown in the graph below, Australia's results improved at a steady rate during the 1980s, achieving a best result inside the top 50. Results have varied to some degree in the last five years, although the overall trend is still showing an improvement. The rate of improvement, however, appears to have slowed between 1988 and 1994.

Cross-country skiing (30km, 50km) - World Championships and Olympic Games
Freestyle skiing - World Cup

Freestyle skiing is a relatively new international sport, with a full international program only beginning in the late 1980s. Historically Australia has been best represented in the men's moguls and the women's aerials. The graph below shows the highest ranked Australian in these disciplines at the end of the annual World Cup circuit (results for the 1992/93 year are currently unavailable).

![Graph showing freestyle skiing rankings](image)

The graph indicates that Australia has made significant improvement in men's moguls, the most competitive of the freestyle disciplines, moving from 33rd place in the 1990-91 season to 12th in 1993-94. Australia has been consistently strong in women's aerials, with an Australian athlete winning the World Cup in 1991-92. End-of-year rankings have been within the top six on each occasion. An injury to Australia's leading competitor after 1992 has contributed to the slight decline in performance levels in 1993-94.

Freestyle skiing - Olympic Games

Men's moguls was added to the Olympic Games in 1992. In 1994 women's aerials was also included, having been a demonstration event at the 1992 Games. Australian freestyle Olympic results are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Men's moguls</th>
<th>Women's aerials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>11th, 14th</td>
<td>7th, 10th</td>
</tr>
<tr>
<td>1994</td>
<td>14th, 16th</td>
<td>6th, 16th</td>
</tr>
</tbody>
</table>
Factors affecting international competitiveness

The following factors were identified by the Australian Ski Federation as relevant to Australia's international competitiveness:

- the level of support provided to elite competitors in other countries is far greater than that available to Australian athletes;

- skiing is not a "national" sport in Australia. It is not part of the national culture as it is in other countries which results in problems in attracting the best "natural" athletes;

- most Australian skiers are unable to make a full-time commitment to their sport, which places them at a disadvantage when compared to European and North American athletes;

- there is a lack of funding to compete internationally. The costs associated with being part of the national team (which are borne mostly by the individual skiers) contributes to competitors leaving the sport;

- Australia's home international program is limited, mainly due to the distances the overseas competitors have to travel to compete here. As a result, Australian skiers need to rely on overseas events for the right level of competition;

- as most Australian skiers are predominantly self-funded, selection of athletes for the national team has in some cases been determined by who can afford to tour rather than choosing the best athletes;

- Australia has a large participation base in terms of the number of people who ski each year. The number of actual competitors, however, is quite small;

- the break-up of countries in eastern Europe has added to the nations Australians must compete against and has also imposed greater entry restrictions to events for all international competitors.
Overall funding to snow skiing has increased in a number of distinct stages, most recently under the "Next Step" program which began in 1989-90. The main components of the total funding have been for international competition and grants to the Australian Ski Federation. As was the case with most sports, funding to snow skiing declined in the years leading up to the "Next Step" program.

**Link between funding and performance**

There is no way of measuring the extent of the link between funding and performance in skiing, particularly given the multi-disciplinary nature of the sport and the international factors identified earlier by the Australian Ski Federation. Funding provided to skiing has assisted Australian skiers to overcome some of the barriers related to Australia's geographical isolation and helped to develop programs designed to improve the sport's competitive base.
4.2.29 MEN'S SOCCER

Senior men

It is not possible to graph Australia's international soccer performances at the senior level since 1976, due to the inconsistent nature of the team's competition program in that time. The principal world soccer competition is the World Cup held every four years. Australia has qualified for the World Cup final once, in 1974. Details of World Cup campaigns since that time are:

1978  won Oceania stage but eliminated in second round of qualification
1982  eliminated in second round of qualification
1986  eliminated in second round of qualification
1990  eliminated in second stage of qualification
1994  eliminated in third stage of qualification

Aside from World Cup qualifiers, the Australian team has maintained a busy program of international matches involving countries in the Asia-Pacific region and other parts of the world. Due to the varying standard of opposition in these matches, and the status of the games ("friendlies" vs full internationals), it is not appropriate to perform any time series analysis on Australia's performances during this period.

What is apparent by examining the results, however, is that Australia is increasingly looking to Europe and South America for suitable competition, a reflection of the improved standard of the national team. The increase in the number of Australian players recruited by overseas teams and the flow through of players from successful Olympic and youth teams to senior levels are also good indicators of improved overall playing strength in Australian soccer.

Olympic Games

An Australian team has participated in the two most recent Olympic Games. The team placed seventh in 1988, and progressed through a demanding qualification series in 1992 to compete in Barcelona, where it finished fourth.
The Australian team's performances to place fourth at the 1991 and 1993 World Youth Championships were very impressive achievements given the worldwide interest in the sport and the number of competing countries. Results had declined since the inaugural World Youth Championships in Australia in 1981, although simply qualifying for the event represents some form of achievement. Australia failed to qualify for the 1989 tournament, losing in the qualification round to a team that was subsequently disqualified for playing over age players.

Junior (under-17)

The World Junior Championships were first held in 1985. Australia has qualified for every tournament, reaching the quarter-finals (top 8) in 1985, 1991 and 1993 and the first round (top 16) in 1987 and 1989.
Factors affecting international competitiveness

The following factors were identified by the Australian Soccer Federation as affecting Australia's international competitiveness:

• it is claimed that soccer is the most widely played sport in the world, involving around 180 competing countries;

• the international profile of the sport and the enormous number of players worldwide means that many other competing countries have far greater financial resources and larger participation bases than Australia;

• soccer is an integral part of the culture and is the main sport played in many countries;

• geographically, other countries are generally much smaller and less isolated from major competitors;

• other countries generally have far greater opportunity to compete in high level international competition;

• the fact that major competing countries have far greater resources available to them enables them to adopt a fully professional approach to their programs;

• facilities overseas are generally much better than those in Australia;

• Australia’s major competitors have well developed infrastructures and elite programs and quality coaching support;

• new funding to soccer under the Olympic Athlete Program will enhance the preparation of the national team by enabling a "club-type" environment to be developed;

• a change in the qualification system for the 1998 World Cup will increase Australia's chances of qualifying for the finals for the first time since 1974;

• the Australian Olympic team will benefit from a changed qualification system for Atlanta, which requires the Olyroos to qualify for the Games through Asia rather than playing a European team.
After a period of little change between 1985-86 and 1988-89, funding has increased steadily in each of the past five years. Funding to men's soccer has gone against the trend in the last two years by continuing to increase, the main reasons for this being a grant to host the World Youth Championships in 1993 and the establishment of an Intensive Training Centres program for soccer in 1993-94.

**Link between funding and performance**

Australia's international soccer performances at all levels have closely followed the trend in funding levels as shown in the graph above. In the last five years, there has been steady improvement in Australia's international performances from under-17 through to senior level and this has been matched by a steady increase in the funding provided to men's soccer. While there are definite similarities in the funding and performance trends, it is difficult to draw conclusions regarding a direct link between them.
4.2.30 WOMEN'S SOCCER

International results

The international program for women's soccer has been quite limited. Women's soccer will be played at the Olympic Games for the first time in Atlanta in 1996. In addition, there has only been one World Cup, which was held in 1991. Australia did not reach the finals of this event, losing to New Zealand in the qualifying stage.

Due to the lack of major international tournaments, the international program for the Australian team has been irregular and inconsistent in terms of the quality of the opposition played. It is therefore difficult to undertake any sort of time series analysis of Australia's performances in international competition as the level of competition and the frequency of competition do not provide a consistent enough basis from which to observe trends.

Factors affecting international competitiveness

The following factors were identified by the Australian Women's Soccer Association as relevant to Australia's international competitiveness:

- a lack of government funding;
- geographical isolation, which combined with the above point has resulted in a lack of international competition opportunities;
- there have been no paid officials to co-ordinate the sport's coaching programs, contributing to a lack of technical expertise;
- women's soccer lacks a significant player base in Australia;
- the sport is not able to offer a career path for its elite athletes.
Funding to women's soccer increased gradually between 1979-80 and 1988-89, with the bulk of the support in the form of grants to the Australian Women's Soccer Association. Following the introduction of the "Next Step" program in 1989-90 there was a funding increase of almost 100 per cent, followed by further slight increases over the next three years. In 1993-94 there was another substantial increase in funding with the allocation of far greater resources for international competition.

**Link between funding and performance**

Given the nature of the international program for women's soccer and the generally low levels of support provided prior to 1989-90, it is not possible to observe any link between ASC funding and international performance.
4.2.31 SOFTBALL

World Championships - Senior women

The Australian women’s softball teams have been consistently among the leading nations at both the senior (above) and junior (below) levels. The senior women’s team has placed third at the last two World Championships and has finished out of the top five only once in five tournaments. Results from the most recent World Championships in 1994 indicate that the margins between the top countries is very small.

Junior women

At the junior level, the Australian team has placed fourth at the last three World Championships. Results once again indicate that there is little between the teams at this level.

Men

The senior men's team has competed in two World Championships, placing seventh out of 14 countries in 1988 and fifth of 18 countries in 1992.

The Australian junior men's team (under-19) placed fourth at the inaugural World Junior Men's Championships in 1992.
Factors affecting international competitiveness

The following factors were identified by Softball Australia as relevant to Australia's international competitiveness:

- the quality of coaching programs in Australia has been greatly enhanced by the introduction of the AIS softball program in 1993. Opportunities have increased for coaches around the country to become more involved in the development of elite players;

- funding under the Olympic Athlete Program will further improve the coaching infrastructure and enable better delivery of programs to elite athletes;

- the inclusion of softball on the program of events for the Atlanta Olympic Games will provide an incentive for mature players to remain in the sport;

- the national softball league and the AIS softball program have had a positive impact on the performance of elite players and on the development of younger players;

- Australia is geographically isolated from major competing countries and from major international competition. There has been an increased emphasis on international competition in recent years, and Olympic Athlete Program funding should assist in overcoming this problem to some extent;

- Australia's major international competitors - the United States, Japan and Chinese Taipei - have much larger participation bases than Australia and also invest far greater amounts of money into development programs.
The most prominent feature of the graph is in 1993-94 with the first full year of funding to softball's AIS program (the program commenced with partial funding late in the previous year). Prior to 1993-94, funding to softball had increased under "Next Step" with greater support under the National Sports Program and Australian Athlete Scholarship Scheme. Grants to Softball Australia have also increased in the last five years, while funding for international competition has varied on an annual basis depending on the competition program for the particular year.

**Link between funding and performance**

While it is not possible to draw conclusions about the relationship between funding to softball and international performances, it is significant to note that the worst performance by an Australian women's team at a World Championships (1986) occurred during a period when support to the sport declined. Subsequent funding increases have coincided with improved performances and Australia's return to the top four nations in the world. A similar trend applies to men's results, where World Championships results have improved as funding to softball has increased.
4.2.32 SQUASH

Senior men - World Championships

Performances at World Championships have been very consistent throughout the period. Until 1993, there was at least one Australian player in the top four at each event. There was a slight decline from the very high levels of the late 1970s and early 1980s due to the retirement of Australia's leading player at that time. Results have declined at the two most recent events, with performances in 1993 the lowest in 20 years. Depth of performances appears to have improved since 1988, although this is difficult to accurately assess due to incomplete data.

Senior men - World Teams Championships

Based on the graph right it would appear that the depth in Australian men's squash has improved over the past 15 years, with the Australian team winning the World Teams Championship in 1989 and 1991, and placing second in 1993. The previous best result was a third placing in 1985.
Senior women - World Championships

Australian results were at the highest possible level from 1976 to 1983, with wins in all four World Championships in that period as well as second place in 1981 and 1983. Results declined in 1985 but have since returned to the previous high levels, with two semi-finalists in 1987, 1989 and 1991, and victory at the 1993 and 1994 World Championships.

Senior women - World Teams Championships

Australian teams have been very consistent in this event, finishing third once and either first or second on every other occasion. The low point on the graph (if it can be called low) occurred in 1985, the same year that individual performances were also at their lowest.
Junior men - World Championships

![Graph showing the performance of junior men in World Championships from 1974 to 1994.](image)

Australian results had been extremely consistent prior to 1990, with a finalist on each occasion as well two placings in the top three between 1982 and 1988. Performances have since declined, beginning at the 1990 event with a best result of sixth. In 1992 there were no Australian quarter-finalists (top eight), while there was one quarter-finalist in 1994.

Junior men - World Teams Championships

![Graph showing the performance of junior teams in World Championships from 1974 to 1994.](image)

Prior to 1994 Australia had maintained a very high standing in the teams event, finishing either first (five times) or second (twice) on each occasion since 1979. It is interesting to note that in 1992 Australia won the junior men's teams tournament despite there being no Australians placed in the top eight in the individual event.
Junior women - World Championships

Australian results have once again been very consistent in this event, with no worse than a third placing for the leading Australian at the six events held to date. Australia has won the World Junior Women's Championships on three occasions, including the most recent event in 1993.

Junior women - World Teams Championships

Results in this event have remained very high, with Australia placing either first or second on each occasion since 1985.
Factors affecting international competitiveness

The following factors were identified by Squash Australia as relevant to Australia's international competitiveness:

- squash is widely played in many countries. There are 102 countries affiliated to the World Squash Federation while the number of countries where squash is played is more than 120;

- Australia is geographically isolated from most of the world's major tournaments. This is a barrier particularly to younger players trying to obtain ranking points to establish themselves on the circuit as it means they have to spend most of their time overseas. As prize money available to these players is quite small some of them have left the international circuit which has resulted in a decline in performance because they are unable to compete with full-time professionals;

- Australia's geographical isolation is compounded by a lack of opportunities on the domestic circuit. Squash Australia cites a lack of Government and corporate support to develop the circuit, which would ideally include 20 small prize money tournaments and three larger events;

- Australia's geographical isolation combined with a shortage of local tournaments has contributed to a lack of depth within Australian squash. As an example, there are three Australians currently ranked in the world's top 10, but only another three Australians are ranked between 11 and 50. In contrast, there are 16 English players ranked between 11 and 50, an indication of the benefits of being located closer to the main competition centres;

- the lack of major tournaments on the Australian circuit also limits the promotional opportunities available to the sport;

- the prize money available in squash enables only the top 10 men and the top three or four women to make a comfortable living from the game;

- while the AIS squad program will adopt a more flexible scholarship system, Squash Australia believes an Intensive Training Centres program is required to develop squash players in all States.
Australian Sports Commission funding to Squash

Funding to squash has progressed through a number of distinct phases. The first significant funding increase occurred between 1983-84 and 1985-86 and was caused mainly by the introduction of the AIS squash program and higher funding to Squash Australia. Funding then declined in the following three years due mainly to a decrease in grants for international competition and under the Australian Athlete Scholarship Scheme. There was then a substantial increase in all areas of funding 1989-90 with the introduction of the "Next Step" program, although less money for international competition in the last two years has seen a slight reduction in the total amount in 1992-93 and 1993-94.

Link between funding and performance

There is a degree of similarity between the funding and performance trends in squash, most notably in the years following 1985 when both funding and performance levels were in decline. Subsequent funding increases under "Next Step" also roughly coincide with improvements in international performances. While it appears there is some relationship between ASC funding and performance it is not possible to determine the extent of any direct link given the presence of other factors identified by Squash Australia.
4.2.33 SWIMMING

Finalists - Olympic Games and World Championships

The above graph indicates that the number of Australians reaching the finals of swimming events at Olympic Games and World Championships has increased significantly since 1976. The marathon event is not included in the graph as it was only added to the World Championships program in 1991 and is not part of the Olympic Games. The trend line showing the improvement would probably be more constant but for the unusually high number of finalists in 1980 and 1984 which were probably assisted by the boycotts at these Games. The lowest point in 1986 was partially influenced by a scheduling conflict with the Commonwealth Games in that year.
The graph below demonstrates that, in terms of medals, Australia's performance at the 1991 World Championships and 1992 Olympic Games were significantly superior to any other boycott-free event since 1976. There was further improvement at the 1994 World Championships with a best-ever four gold medals (excluding the marathon).

Swimming: Number of medals won at Olympic Games and World Championships

Marathon swimming

The marathon event is only new to the World Championships and is not yet part of the Olympic program. Australia has been among the leading countries at the two World Championships where the marathon has been held. In 1991 Australia won one gold and one bronze medal, and in 1994 Australian athletes won one gold, one silver and one bronze medal. The Australian team also took out the teams event in 1994.
Factors affecting international competitiveness

The following factors were identified by Australian Swimming Inc as relevant to Australia’s international competitiveness:

- Australia’s geographical isolation significantly limits the opportunities for Australian swimmers to compete regularly at an international level. This isolation also affects the preparation periods for Australia’s swimmers as most international competition is held during the northern summer, which is the “off-season” for swimming in Australia.

  In addition, Australia has difficulty as a Commonwealth nation with the scheduling of major events such as the Commonwealth Games and the World Championships, which have been held within a few weeks of one another on three of the last five occasions;

- the emergence of China as the major force in international women’s swimming;

- training regimes and elite programs of other countries have affected the results achieved by Australian swimmers at major competitions. While the reunification of Germany and the breakdown of the former Soviet Union may have reduced the programs in these countries, new countries such as China have emerged more recently to fill the void;

- cultural factors within Australia which link swimming and water activities as elements of the Australian lifestyle are a positive factor in attracting natural talent to the sport;

- while many people within the sport of swimming consider the influence of performance enhancing drugs as a major factor internationally, at present a large amount of the information presented is anecdotal and unable to be proven. Documents released from the former East Germany seem to support claims of widespread use of performance enhancing drugs under that system, while the multiple positive drug tests in late 1994 from Chinese swimmers have given credence to claims made about the training methods in that country;

- financial assistance both direct to the swimmer and indirectly through elite programs is also a contributing factor. Major competing countries such as the USA, Canada, China and some European countries, and until recently East Germany, have had large financially assisted programs;

- the breakdown of the former Soviet Union has created potentially stronger international competition as each of the republics can field two athletes at major competitions (formerly there were two competitors per event from the entire Soviet Union);

- swimming is not a compulsory activity in Australian schools, which potentially impacts on the development and instruction of talent from a young age.
For a number of years swimming has been one of the Commission’s highest funded sports. The graph indicates that between 1983-84 and 1988-89 funding to swimming remained relatively stable, although there was some decline over the last two years of this period (as was the case with most sports). The introduction of the "Next Step" program in 1989-90 resulted in substantial funding increases to swimming across all areas. The Intensive Training Centres program was established in that year, the level of support for international competition and under the Australian Athlete Scholarship Scheme also increased significantly, and additional funding was provided for the AIS program.

Link between funding and performance

There appears to be a relationship between the funding and performance trends in swimming. The graphs showing the number of finalists and the number of medals won are similar to the pattern of ASC funding since 1976. The strong performances since 1991 coincide with major funding increases under the "Next Step" program, while the period when Australian performances were at their lowest (1986) was also a time when funding to the sport either "levelled off" or marginally declined. Despite the appearance of a close relationship it is not possible to determine the strength of any such relationship due to the presence of other international factors.
There has been a downward trend in performances in both solo and duet, although this has slowed considerably since 1986. A total of 15 countries participated in the 1978 World Championships, where Australia registered its highest placings in both solo and duet. In all other years there have been at least 17 countries participating in solo and duet, with as many as 24 countries at some events.

Australia has also been represented twice in the teams event, placing 15th and 1986 and 11th in 1991.
Factors affecting international competitiveness

The following factors were identified by Australian Synchronised Swimming Inc as affecting Australia's international competitiveness:

- limited funding has been provided to the sport which inhibits planning and longer-term development projects;

- there is a lack of overseas coaching experience available in Australia;

- synchronised swimming has a low participation base in Australia from which to develop elite athletes;

- geographically, Australia is isolated from other competing countries which prevents easy access to high level international competition;

- Australian athletes must overcome tough qualification requirements in order to compete in major events;

- the sport has a low profile in Australia, which contributes to the low participation base and lack of funding.
Low levels of funding have been provided to synchronised swimming since 1980-81, mainly in the areas of international competition and National Sports Program support. Funding to synchronised swimming has increased since the introduction of the "Next Step" program in 1989-90, which allowed grants to be provided to Australian Synchronised Swimming Inc for the first time in a number of years.

**Link between performances and funding**

Due to the level of funding provided to synchronised swimming it is not possible to determine the extent of any link between performances and funding. As annual funding has only increased above $25,000 in the last three years, there has not been sufficient resources over a long enough period to observe any significant linkage.
4.2.35 TABLE TENNIS

Women

Performances in the teams event have remained reasonably stable for the entire period. In nine World Championships between 1977 and 1993, Australia has placed between 23rd and 29th on each occasion.

Men

Performances by the Australian men’s team have declined from a ranking of 12th in 1979 to 39th in 1993. Apart from an improvement in 1987 which saw the team’s ranking lifted to 19th, results have declined steadily at each event.

Olympic Games

Table tennis was only added to the Olympic program in 1988 and as a result there are insufficient results to generate any sort of time series analysis of Australia’s Olympic performances. Australian representatives competed in the men’s and women’s singles in 1988, and the women’s singles and doubles in 1992, but were eliminated in the preliminary rounds on each occasion.
Factors affecting international competitiveness

The following factors were identified by Table Tennis Australia as relevant to Australia's international competitiveness:

- there are more than 150 countries involved in table tennis and it is a major sport and part of the culture in many of these countries, particularly in Asia and Europe. As a result, government and corporate funding to the sport is far greater in these countries than in Australia, creating well developed administrative, coaching and player support structures, strong national leagues and advanced talent identification and development programs;

- the competitive player base in this country is small compared to many of Australia's major competitors;

- Australia's major competitors are generally smaller geographically and less isolated from other competing countries, enabling easier access to domestic and international competition.
Australian Sports Commission funding to Table Tennis

The bulk of funding to table tennis in all years has been in the form of grants to Table Tennis Australia. Funding to table tennis increased significantly under the "Next Step" program in 1989-90, with higher levels of assistance to Table Tennis Australia as well as support for two years for an elite players' academy in Melbourne and greater assistance under the National Sports Program.

Link between funding and performance

There has been no major improvement in international table tennis results to coincide with overall increases in funding to the sport. Although women's results have shown some recent improvement, there has also been a significant decline in men's team results. It is, however, not possible to comment further on the relationship between funding to table tennis and the international performances due to the presence of other international factors and lack of time series information for both men's and women's singles.
4.2.36 TENNIS

As there is no official World Championship in tennis, year-end rankings have been used to provide a basis for consistent measurement since 1976. Please note that rankings down to 250 are incomplete in some of the early years, and junior results for 1986 are unavailable.

**Men**

The above graph shows that the number of Australians ranked in the top 50 has declined since the late 1970s and early 1980s. It also indicates that the highest ranking for an Australian player has declined, particularly since 1987. The highest ranking was outside the top 20 from 1989 to 1994, and out of the top 50 in 1991, although the 1993 and 1994 rankings are a considerable improvement on the previous four years.

The graph below shows that the decline experienced within the top 50 is also evident among the lower rankings as well. The number of Australians in the top 50, between 50 and 100 and between 100 and 250 have all declined over the past decade.
Women

Tennis: Women - Australians ranked in the top 50 at 31 December each year

The above graph demonstrates a similar situation in women's tennis - a decline in the level of the highest ranking Australian over the past decade, and a significant decrease in the number of women ranked in the top 50. As with the men, the highest end of year women's ranking in 1993 represented a considerable improvement on the previous three years.

The graph below shows that the number of women ranked in the top 250 has declined from the levels of the late 1970s and early 1980s, although there has been little change over the past ten years. While the total number of Australians ranked in the top 250 has not changed greatly in this time, the proportion of these ranked inside the top 100 has decreased noticeably.

Tennis: Women - Number of Australians ranked in the top 50, top 100 and top 250 (as at 31 December each year)
Australian juniors have consistently been ranked in the world's top 10. Rankings have fluctuated to some extent since 1985 although the trend since 1988 has been one of steady improvement in terms of the highest ranked Australian. The overall number of Australians ranked in the top 50 has declined although not to the same extent as in the senior rankings.

The graph below indicates that there has been a significant decrease in the number of rankings between 50 and 100 in addition to the minor decline in the number of rankings in the top 50.
Junior women

Australia regained a high ranking in junior women's tennis in 1994 following a period of decline. There has also been a decrease over the past decade in the total number of Australians in the top 50, the low point being in 1993.

Prior to 1991 there had been little change in the number of junior women ranked between 50 and 100, however in 1991 the number of rankings between 50 and 100 decreased sharply. This trend has continued in more recent years although there was some improvement in 1994.
Factors affecting international competitiveness

The following factors were identified by Tennis Australia as being relevant to Australia's international competitiveness:

- international players are achieving success in senior tennis at a younger age. As a result, Australia's generally good results at the junior level are not necessarily a good predictor of future senior success because many of the best juniors do not compete regularly in junior tournaments;

- Australia's previous natural advantages of good weather and grass court surfaces for major tournaments have been largely nullified by the increased availability of winter indoor venues overseas and the worldwide trend to court surfaces other than grass;

- geographically, other countries are generally much smaller and less isolated from major competitors;

- there has been considerable growth in the sport internationally in the last 10 years, and many more countries (particularly in Europe) have implemented large-scale player development programs;

- philosophical differences exist in Australia concerning the most appropriate coaching system (either individual or squad-based) to achieve top 10 status for Australian male and female players;

- potential elite tennis players have a wider range of sporting career options than is available in many other countries;

- the trend within the school system to de-emphasise competitive sport;

- the role of parents in Australian tennis has been neglected, although a decentralisation of the elite player program is assisting in that area by providing home support to juniors who may be better suited to this type of environment;

- the standard of tennis coaching has improved internationally in recent years.
Australian Sports Commission funding to Tennis

**TENNIS**
ASC Funding 1976/77 to 1993/94 (Constant Prices 93/94)

Funding to tennis increased in 1980-81 when the sport was part of the initial intake into the AIS program. With the exception of 1983-84, the total funding to tennis between 1980-81 and 1988-89 comprised funding to Tennis Australia and to the AIS program. International competition funding to tennis has generally been limited to age events such as the World Veterans Championships. Under the "Next Step" program in 1989-90 there was an increase in funding to Tennis Australia and to the AIS program, and in the last three years there has been an allocation under the Aussie Able program to Tennis Australia for integration projects in tennis for people with disabilities.

**Link between performance and funding**

For many years Australia enjoyed a pre-eminent position in world tennis due in part to a number of natural advantages and a flow of exceptional talent. The competition environment has changed dramatically, and ASC funding has been provided to help develop the base for a resurgence. Most recent results have been encouraging in both senior and junior tennis, indicating an upward trend and in some cases the highest rankings for a number of years. While there has been an overall increase in funding coupled with a downward trend in performances since 1976, it is not possible to draw conclusions about any relationship between ASC funding to tennis and the world rankings of Australian players due to the presence of other international factors.
4.2.37 TRIATHLON

Men

The graph shows that as soon as official Triathlon World Championships commenced in 1989, Australia emerged as one of the leading nations in the sport. This trend has continued despite the fact that the sport has grown internationally, with a much stronger presence now in Europe (the past three world champions, for example, have been from England). In the six years that Triathlon World Championships have been held, Australia has remained a strong force, winning the event twice and having three placings in the top 10 on three occasions.

Women

The graph shows that as soon as official Triathlon World Championships commenced in 1989, Australia emerged as one of the leading nations in the sport. This trend has continued despite the fact that the sport has grown internationally, with a much stronger presence now in Europe (the past three world champions, for example, have been from England). In the six years that Triathlon World Championships have been held, Australia has remained a strong force, winning the event twice and having three placings in the top 10 on three occasions.
The improvement in women's results at the Triathlon World Championships is noticeable in the above graph. Best performances have improved (an Australian athlete has won the past three World Championships), while in 1993 and 1994 there has been greater depth in the results with two placings in the top 10 and three in the top 15 in 1993 and four in the top 10 in 1994.

Junior men

Results have been consistently high in the junior men's category, with a best result in the top 10 and at least two placings in the top 15 on each occasion. Results improved dramatically in 1993 and 1994, with four placings in the top 15 in 1993, and four in the top 10 in 1994, including the world champion. Junior competitions have followed the same pattern as senior events with the growth in the number of countries competing (particularly countries from the northern hemisphere).

Junior women

Junior women's results have also been at a high standard at each World Championships with a best placing in the top five on each occasion, three placings in the top 10 in three of the five events, and a world champion in 1994.
Factors affecting international competitiveness

The following factors were identified by Triathlon Australia as relevant to Australia's international competitiveness:

- the sport of triathlon quickly became popular in Australia in the early 1980s and Australia established itself as a leading nation in the sport;

- triathlon is now becoming more competitive internationally, with other nations, particularly those in Europe, devoting more resources to the sport. International results in recent years verify that European nations are becoming more of a force within triathlon. Through anecdotal evidence and correspondence from other national triathlon associations, there is an awareness of the types of programs being developed in other countries;

- Triathlon Australia accepts that it will need to work hard if it is to retain its number one world ranking in the face of tougher competition;

- coaching standards in Australia are regarded as the equal of any in the world. With the recent appointment of a High Performance Manager to the staff of Triathlon Australia, coaching will continue to underpin elite performances in the sport;

- a talent identification program has been developed as Triathlon Australia moves towards more grass roots development in the sport. An elite squad program has been established for athletes at World Junior Championships level, while further tiers have been added to the program for junior one (13-15 years) and junior two athletes (16-19 years);

- there are currently 75 nations competing in triathlon at the World Championships. As triathlon is a new sport, this figure is expected to continue to grow throughout the decade;

- in September 1994, triathlon was added to the Olympic program for the 2000 Games, which is likely to increase the number of countries involved in triathlon as well as the level of resources invested in the sport by these countries;

- while there is no evidence of performance enhancing drug use within triathlon, Triathlon Australia takes the issue very seriously and has developed its own drug policy which conforms to IOC standards. Triathlon Australia also undertakes rigorous testing of its athletes both within and out of competition.
Australian Sports Commission funding to Triathlon

As a relatively new sport, funding to triathlon was first provided as recently as 1986-87, and then not again until 1989-90 under the "Next Step" program. Since "Next Step" funding has increased substantially across all areas, with grants to Triathlon Australia comprising more than half of the total funding in 1993-94. Competition funding has varied according to the international program for that year, while high-ranking individual performances in recent years have also seen greater support under the Australian Athlete Scholarship Scheme.

Link between funding and performance

Given that ASC funding to triathlon effectively commenced five years ago, it is not possible to draw conclusions regarding any link between funding and performance. Australian triathlon has maintained its position at the top of the sport over this period, at a time when there was increasing international competitiveness and growth in the sport worldwide. This rate of growth will only escalate now that the sport has been given Olympic status for the Games in 2000. ASC funding to triathlon has assisted in the development of programs designed to maintain Australia's pre-eminent position.
4.2.38 VOLLEYBALL

The following analysis relates to the international performances of indoor volleyball for the period 1976 to 1994. Beach volleyball is also now part of the Olympic program (beginning in 1996), however, there are presently insufficient performance data to undertake any type of analysis of results in this sport.

Men

![Volleyball: Senior men - International results 1976 to 1994](image)

Men's results declined up to 1987 but have since improved. Although volleyball is an Olympic sport, the limited number of qualifying places available and a strong regional qualifying zone has meant that the Australian volleyball team has never qualified for the Games. The number of teams for the World Championships is also limited to 16 (there were 24 places before 1982), and lower rankings are dependent upon finishing position in pre-qualifying tournaments. The Australian team achieved its highest world ranking after the World Championships in 1990, although the ranking fell again in 1994. Australia competes regularly at the Continental Championships as part of the strong Asian Conference, achieving a commendable fourth placing in 1991.
Women

Volleyball: Senior women - International results 1976 to 1994

Australia's international women's volleyball results have followed a similar pattern to the Australian men's team - results declined up to 1986 and then improved, then declined again more recently. The improvement in the women's results has not been as pronounced as that for the men. The ranking of 12th at the 1982 World Championship might be artificially high as it was assisted by the withdrawal of East Germany in the first round of competition, which resulted in Australia gaining a simple entry to the second round. The Australian women's team was not given a world ranking in 1994.

Women's volleyball is limited to eight teams at the Olympic Games and the Australian team has been unable to qualify for any Olympic event. Prior to 1993, the Australian team had maintained its ranking around the top six in the strong Asian zone despite an increase from nine to 16 since 1983 in the number of teams competing in the tournament.
Factors affecting international competitiveness

The following factors were identified by the Australian Volleyball Federation as relevant to Australia's international competitiveness:

- volleyball is one of the most widely played sports in the world. With the break-up of the former Soviet Union, the number of competing countries has grown further in recent years;

- Australia must qualify for major international tournaments through the very strong Asian zone, which contains some of the world's most powerful volleyball countries. Some of the new republics to evolve from the former Soviet Union have also become part of the Asian zone, further increasing its strength;

- many competing countries have far greater resources to invest in national programs than Australia. Many of these countries have had full-time elite programs for decades. These countries also have far more extensive international competition programs than Australia.
Funding to volleyball has increased by more than 400 per cent since 1988-89, due mainly to the introduction of an AIS men's volleyball program in 1989-90 and a women's program in 1993-94. Grants to the Australian Volleyball Federation have remained relatively stable, with other funding increases coming in the international competition and National Sports Program areas.

Link between funding and performance

The funding trend for volleyball has not been matched by performance trends for both men and women. Funding to the sport has increased substantially in the last five years, while most recent results from the Asian Championships have shown a decline. The results suggest that ASC funding increases to volleyball have had little impact on performance, although it is not possible to conclude this with any certainty due to the presence of other international factors and the fact that there have been relatively few tournaments since the introduction of the AIS program to assess its full influence.
4.2.39 WATER POLO

Men

Men's water polo - International results since 1976

Australian men's water polo results improved steadily during the 1980s but jumped significantly after 1990. The Australian team has improved its ranking in each of the three world level events shown on the graph. The biggest improvements have occurred at the more recent events - a best-ever third placing at the 1993 World Cup and a fifth placing at the Barcelona Olympics in 1992. The result in Barcelona is probably a more accurate indicator of Australia's international standing than the fifth placing achieved at the boycott-affected 1984 Olympics. World Championships placings have been consistently lower than results from the other events and this was again the case in 1994.

Women

The Australian women's team has registered consistent results since 1986. The team has placed in the top five at each major international event it has contested, and won a gold medal at the 1986 World Championships and a silver medal at the 1991 World Cup.
The graph shows that Australia's results at the World Junior Championships continue to steadily improve. After placing 11th at the 1983 Championships, results have improved gradually in the last 10 years, with Australia climbing to eighth place after the most recent championships in 1993.
Factors affecting international competitiveness

The following factors were identified by Australian Water Polo Inc as relevant to Australia's international competitiveness:

- there are close to 140 countries affiliated with FINA, the international governing body, and water polo is a major sport in many countries in Europe, the Americas and Asia. In the major water polo countries professional coaches work with players as young as 10 years of age;

- amateur water polo coaches do not exist at any level in countries such as Italy, Spain, Hungary, Cuba, Romania, Mexico, Puerto Rico, Kuwait, the Peoples' Republic of China, and the former Soviet Union and Yugoslavia. Club coaches are paid, either in a full-time or part-time capacity, in countries such as Canada, Germany, France, the Netherlands, Poland, Sweden, Equador, Israel, Japan, South Korea, the Philippines, Saudi Arabia and Singapore;

- the resource levels, player development and support structure available in the major water polo countries enable a fully professional approach to be adopted for the sport to a far greater extent than exists in Australia;

- Australian water polo has benefited from the existence of a professional swim coaching structure which has operated for more than 10 years. Australian players are generally much faster than those from European, Asian and South American backgrounds. The overall level of Australian players' skill and tactical sophistication does not, however, rate with that of their European and American counterparts. This may be attributed to the professional coaching and earlier age at which young players are identified and developed in overseas countries;

- from the AIS experience it takes a minimum of eight years for the effects of the program to be measured, which means that the value of the AIS men's water polo program is only now starting to be fully realised;

- regular exposure to top level overseas competition is considered essential for the continued high performance of Australian water polo teams, as well as visits by leading teams and overseas coaches. Raising the standard of domestic competition is also considered an important factor in providing the elite player base for State, national league and national representative teams, and this has been addressed by the introduction of the National Water Polo League in 1990;

- Australia's geographical isolation from the main centres of the sport lead to additional travel costs and problems with maintaining a reasonable competition program. Domestic travel costs are also a factor with competition held in Australia;

- water polo is not a part of the sporting culture to the extent that it is in other countries, which creates difficulties for the sport in Australia in attracting major sponsorship.
Funding to water polo as a separate sport from swimming only commenced in 1980-81. Prior to water polo's admission into the AIS in 1984-85, some minor international competition funding was provided in addition to some grants to Australian Water Polo Inc. Funding increased overall in the first five years of the AIS program, and then increased more rapidly in 1989-90 under the "Next Step" program. Total funding to water polo more than doubled between 1988-89 and 1993-94 due mainly to the introduction of an Intensive Training Centres program and the expansion of the AIS program to include women. Greater assistance was also provided for international competition and under the Australian Athlete Scholarship Scheme.

Link between funding and performance

Prior to the 1994 World Championships there had been a similarity between the results of Australian men's teams since "Next Step" and the funding provided to water polo, both of which were at their highest levels. However, it is not possible to determine the existence of any direct relationship between funding and performance, particularly given the international factors identified earlier and the fact that the women's program has only recently been admitted to the AIS.
4.2.40 WEIGHTLIFTING

Men

At World Championships since 1990 separate medals have been awarded in each weight category for the snatch, the clean and jerk and the combined total. Previously medals were only awarded for the combined total. To maintain continuity in the analysis, and also because the Olympic Games still operates under the old system, combined total results only have been included in all graphs.

The most prominent feature of the graph is the gold medal performance at the 1984 Olympic Games, which was more than likely assisted by the boycott by the dominant eastern European countries. As a measure of how powerful the eastern European countries were, at the 1976 and 1988 Olympics, which were both relatively boycott-free, all gold medals were won by Eastern Bloc athletes.

The graph shows that the majority of the Australian results have remained grouped between ninth and 16th placing. This places Australia below the level of the leading nations but competitive within the next grouping. Best performances declined in 1988 and 1990 but have improved since. The silver and bronze medals won at the 1993 World Championships (and repeated in 1994) represented a major breakthrough as the first medals won at any world standard competition since 1984. The medals in 1993 and 1994 were won by weightlifters who had emigrated to Australia from eastern Europe.
Between 1987 and 1993 Australian results from the World Women's Championships were consistently between fifth and 10th place, with highest placings each year between fifth and seventh. There was a decline in results at the most recent World Championships in 1994, although it is not possible at this stage to determine whether this is an isolated result or the start of a downward trend in performances. Australia's women weightlifters are similar to the men in that performances are below those of the leading nations (in this case the dominant country is China) but comfortably within the next level.
Junior Men

Results have fluctuated throughout the period with perhaps a slight overall improvement prior to 1993. There has been a slight decline in results at the two most recent World Championships. The pattern is similar to the men's and women's results - maintaining a position at a certain level without making significant progress. Prior to 1991, the best result for each year was generally higher than in 1976 and there had been an increase in the number of placings in the top 10.
Factors affecting international competitiveness

The following factors were identified by the Australian Weightlifting Federation as relevant to Australia's international competitiveness:

- there is a belief that drugs are being used in some countries and there is some anecdotal evidence that in former eastern European countries drug testing takes a low priority due to the general economic problems faced by these nations. The AWF believes that Australian lifters still do not compete on a level playing field;

- the break-up of the former Soviet Union and the political changes in eastern Europe are expected to lead to a downturn in performance levels from these countries once current athletes retire. Until this occurs, the break-up of the Soviet Union has meant that instead of facing one high calibre Soviet athlete at major events, Australian lifters face several athletes of the same calibre representing the new republics;

- weightlifters from major competing countries are being supported to a greater extent than Australian lifters;

- talent identification remains a priority in the sport. Weightlifting's talent identification program is being modified to ensure the best results;

- Australia has now developed a strong coaching base and the junior program is closely monitored by the AWF. With increased funding the junior program will provide the athletes for the 2000 Olympics and beyond;

- funding provided under the Olympic Athlete Program will increase training and international competition opportunities for Australian lifters, leading to better international performances.
Australian Sports Commission funding to Weightlifting

The most significant feature of the graph is the reduction in funding in 1989-90 due to the removal of weightlifting from the AIS program. Funding has since increased, with the bulk of the increase in the international competition area related to Australia's hosting of the 1993 World Weightlifting Championships.

Link between funding and performance

It is not possible to determine the significance of any relationship between ASC funding and performance in international weightlifting, although there is some similarity in the trends observed. Performances in weightlifting declined immediately following the sport's removal from the AIS program but have subsequently improved as funding to the sport has started to increase in recent years.
4.2.41 WHEELCHAIR SPORTS

Results from Paralympics

It is important to note that the graph below refers to total Paralympic results, of which wheelchair sports is only a component. A breakdown of total results to give a medal table for wheelchair sports only is not available. Paralympic results remain a reliable indicator of Australia's international competitiveness because the wheelchair team is a major component of the Paralympic team. They are also the best indicator at present because there are insufficient time series data to analyse wheelchair sports on a sport-by-sport basis. In some sports such as track and field and basketball there has been a recent trend to move away from multi-sport festivals such as the Stoke Mandeville Games as the major form of international competition. Separate World Championships are now conducted for these sports, however they have not been held over a sufficiently long period for a time series analysis to be possible.

Wheelchair Sports: Paralympics - Australia's placing on the final medal table
(total medals)

The graph demonstrates a distinct upward trend in performances since 1976. Australia has improved its position on the medal table by one place at each of the previous three Paralympics after moving from 12th to ninth in 1980.
Factors affecting international competitiveness

The following factors were identified by Australian Wheelchair Athletes Ltd as relevant to Australia's international competitiveness:

- major competing countries generally have a much larger participation base than Australia;

- other countries are generally much smaller geographically and less isolated from major international competition;

- other countries have more opportunities to compete at the international level. Opportunities for Australian athletes have improved in the last few years although the cost of attending international events remains a limiting factor;

- resource levels in other countries enable a more professional approach to be adopted for the sport overseas;

- greater media coverage of wheelchair sports in recent years has enhanced the sport's capacity to generate revenue and increase participation levels.
Funding to wheelchair sports has fluctuated on an annual basis. Total funding is slightly higher than it was a decade ago but down significantly on levels of support in 1989-90 and 1990-91. The funding trend is also consistent with the ASC's policy to encourage the integration of sport for people with disabilities with mainstream sport. This has resulted in less funding to the national sporting organisation for the disabled and more to the mainstream organisations to promote integration. It is important to note that the graph above refers only to support provided to Australian Wheelchair Athletes Ltd. Wheelchair athletes are also serviced through the funding provided to mainstream sporting organisations such as swimming, athletics and tennis for integration projects.

Link between funding and performance

It is not possible to establish any direct relationship between funding to wheelchair sports and international performances because of the break-up of funding to wheelchair sports. As noted earlier, the above graph does not reflect the full level of assistance provided to Australian wheelchair athletes, and therefore drawing any conclusions based on these figures would not be appropriate.
4.2.42 WRESTLING

Olympic Games

The Olympic wrestling tournament is conducted on a knockout basis with competitors eliminated at various stages of the tournament. It is not possible to award a ranking to those competitors eliminated before reaching the top eight. The table below indicates the stage of the tournament that Australians were eliminated for those outside the top eight, and gives the ranking of those athletes within the top eight.

<table>
<thead>
<tr>
<th>Year</th>
<th>1st round</th>
<th>2nd round</th>
<th>3rd round</th>
<th>4th round</th>
<th>5th round</th>
<th>Top 8 ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>1984</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>1988</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>5</td>
</tr>
<tr>
<td>1992</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Australia's best results were two placings in the top eight achieved at the 1984 Olympic Games, although it is possible that these may have been assisted by the boycotts which occurred at these Games. Results at other Games have also been reasonably consistent with at least one Australian advancing as far as the fourth round on each occasion.

World Championships

World Championships results are available from 1985. On one occasion since 1985 an Australian has won three bouts at an event. On all other occasions Australians have been eliminated after winning two bouts or less.
Australian Sports Commission funding to Wrestling

![WRESTLING ASC Funding 1976/77 to 1993/94 (Constant Prices 93/94)](chart)

Funding to wrestling has been at low levels since 1987-88 and predominantly restricted to grants to the Australian Wrestling Union and for international competition. In the four years between 1983-84 and 1986-87 there was far higher support provided across all areas.

**Link between funding and performance**

The best results achieved by Australian wrestlers at Olympic Games coincide with the period of highest funding to the sport. It is not possible, however, to draw any definite conclusions regarding the link between funding and international performances in wrestling due to the low levels of funding the sport has received apart from the years between 1983-84 and 1986-87.
While the number of world yachting champions has fluctuated from year to year, a line of "best fit" through the points on the graph would indicate a steady increase between 1976 and 1991, followed by a decline in 1992 and 1993. Results for 1994 represented a return to pre-1992 levels.

The peaks and troughs on the graph reflect a pattern related to the Olympic cycle. Although there is some variation, in general best performances are in Olympic years or the year preceding the Games, while lower results are generally in the year after the Olympics when competitors may take a break or move to a different boat class. The number of boat classes holding World Championship events has not changed greatly since 1976.

Olympic Games
Two bronze medals in Barcelona gave Australia its best Olympic result since 1976. The results in 1976 and 1992 are very similar in terms of both medals and the depth of performances. The 1984 results may have been affected to some extent (although probably not greatly) by the Eastern Bloc boycott of the 1984 Olympics, while in 1980 the Australian yachting team boycotted the Olympic Games in Moscow.

Junior - World Champions

![Graph: Yachting: Juniors - Number of World Champions](image)

Australia’s junior yachting results have been consistent and have improved since 1984. Multiple world champions for a particular year have become more common in recent years. The hosting of the World Youth Championships, World Mistral Championships and World Sailboard Championships in 1987 contributed to the number of world champions in that year. The bulk of the athletes involved in 1987 also competed the following year and were able to continue the high level of results.

Australia finished third in the teams section of the World Youth Championships in 1990 and 1991 before winning the teams event in 1994.
There is a significant trend evident in the above graph, showing considerable improvement in international performances between 1976 and 1991 before a decline in 1992 and 1993. Results from 1994 seem to indicate that performances are returning to pre-1992 levels.
Factors affecting international competitiveness

The following factors were identified by the Australian Yachting Federation as relevant to Australia’s international competitiveness:

- national programs that are far more extensive than Australia’s exist in many other countries;

- sailing is a northern hemisphere-based sport. The majority of major regattas are conducted in Europe and many others in North America. The sailing conditions in Europe are significantly different to those generally faced in Australia, so competition experience in Europe represents a great advantage;

- the introduction of a new rankings system, based on a World Cup series of races, disadvantages Australian sailors, who do not have the opportunity to compete in as many races as the Europeans;

- sailors representing Australia are faced with sizeable equipment costs. Most boats for international competition are purchased from Europe and are expensive, but made even more so by the Government’s 17 per cent duty and 20 per cent sales tax placed on imported boats. There is also considerable expense in transporting boats overseas to compete, and transporting them throughout Europe during the competition season;

- there are no financial rewards in international sailing, placing a financial strain on participants willing to make the necessary time commitment to the sport. The AYF believes three months sailing in Europe is needed each year, and five months in Olympic years. This is a major reason why many sailors take a year’s break from international sailing in the year following the Olympics;

- the competitive element of sailing represents a minor percentage of the AYF’s membership which, in turn, is a very small part of the number of people in Australia taking part in some boating activity. The achievements of Australia’s sailors from this competitive base have been outstanding;

- other countries, particularly in Europe, are spending vast sums of money on sailing programs.
Funding to yachting increased in 1983-84 after six years of stability. There was a considerable decline in funding in the following five years due mainly to less support in the international competition area and reduced assistance under the Australian Athlete Scholarship Scheme. Following the introduction of the "Next Step" program in 1989-90 funding has increased considerably, particularly in the areas of international competition and Australian Athlete Scholarship Scheme (as more athletes have become eligible based on performances). Funding to the Australian Yachting Federation has also increased in the last few years after showing little change for more than a decade.

**Link between funding and performance**

There appears to be a similarity in the funding and performance trends in yachting, indicating a relationship between the two. The low points on the funding and combined senior and junior performance graphs occur at the same time (1989-90 and 1992-93). In the years immediately following the introduction of the "Next Step" program there were significantly increased funding and performance levels. It is the view of the Australian Yachting Federation that "there is no valid way of measuring the causality between ASC funding and the outcome of yachting programs, except that without such funding some of the Federation's activities would not be possible".
4.3 SUMMARY OF FINDINGS AND CONCLUSIONS

4.3.1 FINDINGS

On the basis of the analysis of the 44 national sporting organisations the following were found in regard to Australia's international sporting performances:

(i) An overwhelming majority of sports have maintained or improved their international performances since 1976, particularly since the introduction of the "Next Step" program in 1989-90. Of the 42 national sporting organisations considered (women's soccer and handball were not considered due to insufficient time series data):

* 35 sports (83%) have maintained or improved their international performances since 1976. This figure represents 95% of the total funding provided to the sports considered, and 83% of ASC funding to all sports;

* 40 sports (95%) have maintained or improved their international performances since the introduction of the "Next Step" program in 1989-90. Performance trends in the other two sports are inconclusive due to a lack of recent data. The number of sports to have improved or maintained their international performances represents more than 99% of the total funding provided to the sports considered, and 87% of ASC funding to all sports.

A sport-by-sport breakdown of the above figures is at Appendix A. The figures demonstrate that as a minimum, additional funding provided under "Next Step" reversed the downward trends of those sports that were in decline prior to 1989. The appendix also shows that funding under "Next Step" led to improvements in a range of sports and the maintenance of already high standards in sports such as squash, swimming and hockey.

(ii) There has been insufficient time to assess the impact of "Maintain the Momentum" programs on international sports performances. As an extension of "Next Step", the full impact of "Maintain the Momentum" can only be properly assessed once the new programs have had time to take effect. The majority of sports in the evaluation have had only one major international event since the Barcelona Olympic Games. Even in situations where recent results have deviated sharply from pre-"Maintain the Momentum" performances, there are insufficient data to determine whether the results indicate a short-term fluctuation or a longer-term trend.
(iii) There is a strong similarity between the total funding provided to the sports in the evaluation and the aggregated senior international competition results from these sports, as shown in the following graphs:

**TOTAL 42 SPORTS**

ASC Funding 1976/77 to 1993/94 (Constant Prices 93/94)

*International senior performances 1976 to 1994 - aggregate Olympic Games and World Championships results of 42 sports*
The trend lines for funding and performances are similar in a number of areas:

- both have increased throughout during the period from 1976;
- both were relatively stagnant in the mid-1980s before declining in the latter part of the decade;
- both demonstrated significant increases following the introduction of "Next Step";
- both appear to have levelled off since 1992 (and in fact declined in 1992-93).

The performance graph also has a number of other important characteristics. There is a pattern to both trend lines over a four-year cycle, with a peak period generally in the Olympic year. The Olympic year represents a year of heightened activity in sport, rather than all results relating directly to the Games themselves. Following the Olympic year there is a drop-off in levels before a gradual build-up leading into the next Olympic year. The reason for the post-Olympic drop-off is caused in part by athletes retiring or taking a break from the sport, or the sport itself re-building at the start of a new cycle, as well as other international factors identified by the sports.

(iv) Aggregated junior results have also demonstrated the same upward trend, although the overall pattern is different to the senior results, as shown below. Due to the fact that many sports do not have recognised World Championships in the junior category (or do not regularly send teams to these events for financial and other reasons), and because historical junior data are generally more difficult to obtain than senior results, the graph includes results from approximately half of the 44 national sporting organisations.
The number of top three placings at world junior competition has increased since the introduction of "Next Step" in 1991. Results for 1992 returned to levels similar to 1989 as overall funding levels remained constant. The increases in funding since 1989 have allowed greater international opportunities for junior athletes.

The number of first placings has also increased, following a similar pattern to the top three placings. In the years immediately prior to "Next Step" there was a general improvement in junior performances, which is different to the pattern of results in senior competition and also against the funding trend in that period. The high point in 1987 was caused by a particularly successful year in junior yachting which resulted in six world junior champions.

Some of the same performance-funding trends are also evident in the Olympic Games results, as shown in the graph below:

The main feature of the above graph is again the improved performances of Australian athletes at Olympic Games since 1976. Results from 1984 are not consistent with results from other years which suggests that the boycotts in effect at this Games assisted Australia's overall performance. Another notable aspect of the graph is the trend line for top 16 performances, which in 1992 improved at a faster rate than the number of medals and number of top eight placings. Top 16 placings are an important measure of depth, and the above graph indicates that the depth of Australia's Olympic performances increased at a significantly faster rate up to the 1992 Olympic Games.
The general performance trend in the above graph is similar to the funding pattern for the Olympic sports (with the exception of the boycott-related 1984 results), as shown in the graph below. Excluding the 1984 Games, the highest rate of improvement occurred between 1988 and 1992, when the rate of increased funding was at its highest. Rates of improvement were lower between 1980 and 1988 (not including 1984), when funding declined in real terms in the four years leading up to Seoul.

(vi) While not truly reflective of Australia's status in world sport, the Commonwealth Games are nonetheless an important indicator of Australia's international standing relative to the other countries in the Commonwealth. As the graph below demonstrates, Australia's performances have clearly improved in terms of the number of medals won.
It is also significant that the ratio of gold medals in Australia's total medal haul increased substantially in 1994 (more than half of the medals won were gold). Depth issues are likely to become more of a consideration with Commonwealth Games analyses in future as it is doubtful that the recent rate of improvement in medals won can be maintained, given the major share of the medals that Australian athletes currently win.

(vii) Results from the Paralympics (defined by Australia's position on the medal table) have also improved consistently since 1976, as shown in the graph below.

Depth issues are not considered to be a factor within the Paralympics due to the small number of competitors taking part in some events.

(viii) There has been a strong link between the level of funding provided to sports, the consistency of funding levels, and the sport's international competition performances. As a general rule, those sports that have received funding increases coupled with a consistent or regular funding pattern have demonstrated greater performance improvements than those sports that have received low levels and/or highly variable or fluctuating annual funding.

(ix) Sports where funding levels have been low and/or inconsistent generally had either inconsistent performance levels or showed little change over a long period. Where funding is provided to these sports it is predominantly for international competition and does not provide for the establishment of longer-term development programs. For most of these sports it was difficult to distinguish a clear pattern for performances.
(x) On occasions when there has been a funding reduction or a withdrawal of funding, either for individual sports or across the board, there has been an associated decline in performance. The clearest example of this was in the period immediately preceding "Next Step", when a general funding decrease coincided with a drop in performance levels. The link between funding and performance in the last two years also demonstrates this effect, with the rate of performance improvement diminishing as funding has levelled off in the past two years (and in fact decreased in 1992-93).

(xi) Despite an increase in funding for international competition many sports still consider geographic isolation to be the main factor affecting international competitiveness.

(xii) Australian competitors have performed at higher levels at major international competitions when the event has been held in Australia. This may be affected by an increased ability to field a larger and/or "better credentialled" team at home events.

(xiii) Improvements in junior performances have been most significant in higher funded sports, most notably rowing, cycling and basketball, where the funding provided has enabled broad and thorough development programs to be implemented.

(xiv) Australia's international performances have improved at a time when international performance standards continue to rise. In addition to higher performance levels on a sport by sport basis, a number of more general factors such as the emergence of China as a major sporting power and the break-up of countries in the former Soviet Union has contributed to a greater depth in sports competitions across the board.

(xv) While there has been a levelling off in performances in the evaluation sports, the depth of performances continues to improve. The rate of improvement, however, appears to have slowed from the first three years of "Next Step". (The rate of funding increase has also slowed.)

(xvi) Australians participate in a very wide range of sports compared to most other countries which tend to specialise and focus their resources on fewer sports.
4.3.2 CONCLUSIONS

It is concluded that:

(i) There is substantial weight of evidence to indicate a relationship between funding to sports and performances at the international level. The funding provided to sports has resulted in:

- a general improvement in performance levels, with the "Maintain the Momentum" program extending a performance trend established under "Next Step" (although at this stage it is too early to analyse the full impacts of "Maintain the Momentum"); and
- a general increase in the depth of international performances. Under "Maintain the Momentum" the trend of a broader elite base resulting in greater depth at international level has continued.

(ii) While any assessment of "Maintain the Momentum" at this stage can only be preliminary, there is sufficient evidence to date to indicate that a continuation of present funding levels may be required simply to maintain current levels of competitiveness. In a number of sports the scope for improved rankings is quite small and therefore the improved performance returns on funding programs will become more marginal. As more sports achieve levels closer to the top in the world, and while international competitiveness increases at this level, maintaining a world ranking will become a primary focus. It is also not surprising that performance levels have consolidated in the past two years following the significant improvements that were made under "Next Step".

(iii) A number of international factors remain beyond the control of the sports in the evaluation but are relevant to Australia's international competitiveness, despite the general funding increases in the last five years. In addition to Australia's geographical isolation which was discussed earlier, factors to consistently emerge from discussions with sports include:

- Australians participate in a wide range of sports, particularly relative to Australia's low population base. Other countries generally participate in and support fewer sports and can obtain cheaper and easier access to high level domestic competition;
- resources invested in sports programs in Australia are still low when compared to major competing countries;
- a lack of international-standard playing facilities;
- a lack of investment in new technology and equipment.
5. PARTICIPATION IN SPORTS ACTIVITIES

5.1 METHODOLOGY

As identified in the evaluation of the ASC in 1992, there are no reliable longitudinal or time series data on national sports activity participation levels or factors contributing to participation, covering the period since 1975. (See Evaluation of the Australian Sports Commission’s Impact on Sports Performances and Participation in Australia, P9, P302-303, P334-339.)

National sporting organisations have, since 1978-79, provided registration figures to the ASC. Registration figures usually (but not always) equate with formal competitor numbers, excluding informal participants which also form part of the participation base. The figures for many of the sports were considered to have serious limitations because these sports do not have systems in place to collect accurate registration data. Some sports have changed their methods of calculation over time, while others submit figures representing club memberships (which include non-playing members). As a result, some sports are believed to submit their best estimate of participation levels to the ASC.

The ASC is assisting national sporting organisations to improve their collection of registration statistics through the development of a computerised registration package - ACoRD. Approximately 70 sports are trialing, or have introduced the system. These sports’ State affiliates are also generally using the package. At this point in time, however, there are no reliable historical registration statistics available from sports which would give an indication of formal sports participation trends.

Since the 1992 evaluation, the Australian Bureau of Statistics has commenced surveying Australians about participation in sports activities through its Population Survey Monitor. To date three quarterly surveys have been undertaken and analysed. Due to seasonal factors, and the short period of coverage, it is not appropriate to attempt to draw conclusions about national sports participation trends at this time.

In the absence of such outcome data, the outputs of the ASC’s two programs which directly impacted on participation at that time were analysed in 1992 - the AUSSIE SPORT program and Australian Coaching Council’s (ACC) National Coaching Accreditation Scheme. This analysis has been extended to cover the last two years. While not able to directly identify exact participation levels, these output measures are still valid indicators of the degree to which the ASC’s programs have penetrated this area, and been accepted within school and community sport. As proxy outcome measures these program outputs enable some time series analyses to be undertaken.

To mark the 10-year anniversary of AUSSIE SPORT, an operational review of State AUSSIE SPORT Units and an impact evaluation of the full program has been commenced and will be completed in 1995, which will provide further information relating to sports participation levels in Australia.
5.2 AUSTRALIAN COACHING COUNCIL

Established independently in 1978, the ACC co-ordinates the national development of coaching in Australia. It develops, implements and coordinates coaching policies and programs in co-operation with national sporting organisations. It was merged with the ASC in 1990-91.

Records of Government funding to the ACC date back only to 1982-83, as shown in the graph below.

The National Coaching Accreditation Scheme provides coaching courses at four levels and results in the formal accreditation of coaches. Specific to each sport, these include modules on the general principles of coaching and human performance, skills, techniques, strategies and science, and the practice of coaching. The highest level, High Performance Coach, was commenced in 1990 and is a two to three year individualised study program. To date only one coach has completed this course, although it is currently being undertaken in 18 sports.

In 1992-93, 84 sports had accredited courses to at least the first level (Level 1), and in 1993-94 this had risen to 89. As some sports, eg. gymnastics, have several disciplines, the number of disciplines for which there are accredited courses is higher - currently 99.

While the ACC accredits the courses and administers the scheme, the national sporting organisations run the particular courses within their sport. Since 1980-81, the following number of coaches have been accredited across all sports:
<table>
<thead>
<tr>
<th>Year</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>HPC</th>
<th>Total</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-81</td>
<td>2,103</td>
<td>221</td>
<td>74</td>
<td></td>
<td>2,398</td>
<td></td>
</tr>
<tr>
<td>1981-82</td>
<td>3,995</td>
<td>1,056</td>
<td>330</td>
<td></td>
<td>5,381</td>
<td>55.44</td>
</tr>
<tr>
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<td>3,571</td>
<td>1,038</td>
<td>52</td>
<td></td>
<td>4,661</td>
<td>-15.45</td>
</tr>
<tr>
<td>1983-84</td>
<td>4,881</td>
<td>535</td>
<td>88</td>
<td></td>
<td>5,504</td>
<td>15.32</td>
</tr>
<tr>
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<td>4,797</td>
<td>661</td>
<td>59</td>
<td></td>
<td>5,517</td>
<td>0.24</td>
</tr>
<tr>
<td>1985-86</td>
<td>5,456</td>
<td>621</td>
<td>61</td>
<td></td>
<td>6,138</td>
<td>10.16</td>
</tr>
<tr>
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<td>5,895</td>
<td>685</td>
<td>41</td>
<td></td>
<td>6,621</td>
<td>7.25</td>
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<td>1987-88</td>
<td>5,757</td>
<td>827</td>
<td>37</td>
<td></td>
<td>6,621</td>
<td>0.00</td>
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<tr>
<td>1988-89</td>
<td>6,127</td>
<td>907</td>
<td>108</td>
<td></td>
<td>7,142</td>
<td>7.29</td>
</tr>
<tr>
<td>1989-90</td>
<td>9,280</td>
<td>1,382</td>
<td>56</td>
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<td>10,718</td>
<td>33.36</td>
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<tr>
<td>1990-91</td>
<td>10,235</td>
<td>1,419</td>
<td>93</td>
<td></td>
<td>11,747</td>
<td>8.76</td>
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<tr>
<td>1991-92</td>
<td>14,713</td>
<td>1,953</td>
<td>184</td>
<td></td>
<td>16,850</td>
<td>43.44</td>
</tr>
<tr>
<td>1992-93</td>
<td>16,815</td>
<td>1,507</td>
<td>149</td>
<td>1</td>
<td>18,472</td>
<td>9.63</td>
</tr>
<tr>
<td>1993-94</td>
<td>22,389</td>
<td>2,343</td>
<td>224</td>
<td>0</td>
<td>24,956</td>
<td>35.10</td>
</tr>
</tbody>
</table>

116,014 15,155 1,556 1 132,726

These figures understate the total numbers of accreditations as, to avoid double counting, a coach who achieves a higher level accreditation is deleted from earlier records and a number are removed for other reasons each year. The total number of accreditations since 1980-81 is 140,158. Annual accreditations are shown graphically below:

![Australian Coaching Council - number of coaching accreditations](chart.png)

The above graph demonstrates a clear relationship between the level of funding provided to the ACC, and the number of coach accreditations. The graph also shows that the rate of coach accreditations continues to increase under "Maintain the Momentum". In the three years of "Next Step", there were 39,315 coaches accredited, compared to 49,983 for the previous nine years. In the two full years of "Maintain the Momentum" 43,428 coaches were accredited.
There are, however, no data which identify the extent to which accredited coaches are coaching, or the number of unaccredited coaches that are coaching. To help address this the ACC introduced, in 1992-93, an accreditation updating process which requires coaches to update after a four year period. It can be assumed coaches actually coaching will want to take part in an updating program. In 1992-93 66 sports had revised programs approved by the ACC, and in 1993-94 it had risen to 85.

5.2.1 CONCLUSIONS

It is concluded that:

(i) The number of coaches accredited has clearly increased over time, with the greatest increases occurring under the "Maintain the Momentum" program.

(ii) There is a clear relationship between funding for the National Coaching Accreditation Scheme and the number of coaches accredited at all levels.

(iii) There is an increasing number of Australians involved in coaching.

(iv) The standards of coaching are improving at all levels, from the grass roots level to the elite, these standards being accelerated by the availability of firstly "Next Step" and then "Maintain the Momentum" funding to the ACC and national sporting organisations.

5.3 AUSSIE SPORT PROGRAM

Since the writing of the 1992 evaluation report, and the implementation of the "Maintain the Momentum" funding, there have been several changes to the focus and operations of the AUSSIE SPORT program, particularly in relation to the cementing of relationships between State departments of sport and recreation and education, and the implementation of what AUSSIE SPORT has termed the "community approach".

The expansion of AUSSIE SPORT in 1990 saw the establishment of State AUSSIE SPORT Units in each State and Territory department of sport and recreation. The partnership between the ASC and each State or Territory department of sport and recreation is formalised through a memorandum of understanding which establishes the roles and responsibilities of each organisation. This formal agreement is supplemented by a strong informal relationship between the National and State AUSSIE SPORT Units, characterised by much goodwill and co-operation at all levels, and maintained via joint working parties and workshops and much informal communication.

From a position of nine State AUSSIE SPORT coordinators in 1989, the program has expanded to involve some 68 full-time and part-time State unit personnel implementing the program at the State, regional and community level. In addition to salaried staff, a number of State units support the operation of honorarium field officer or project officer positions at the local level.
While the coordination of the State AUSSIE SPORT Units is located within departments of sport and recreation, a close liaison exists with departments of education through joint departmental management committees and the ongoing funding for an AUSSIE SPORT education coordinator in many States.

Several of the AUSSIE SPORT education coordinators are now co-located in the departments of sport and recreation, for enhanced operational efficiency and communication, although their main function still lies within the education system.

A condition of each memorandum of understanding is that State units develop operational plans which identify strategies, targets and outcomes. Continued funding is conditional on receipt of an approved State operational plan, annual reports and financial acquittals.

While AUSSIE SPORT is a national initiative it recognises that different States, regions and communities have specific needs which must be addressed if young people are to access the best possible experiences in junior sport. However, to provide a degree of consistency a national AUSSIE SPORT framework has been developed.

5.3.1 AUSSIE SPORT VISION

That AUSSIE SPORT contributes to the enrichment of sporting experiences and opportunities by influencing the practices of key agencies in the development and delivery of junior sport.

5.3.2 AUSSIE SPORT OBJECTIVES

- To increase the awareness and understanding of the value of AUSSIE SPORT at the community, State and national level.

- To facilitate wide community ownership and incorporation of AUSSIE SPORT program elements and activities through effective networking and development of partnerships with key agencies.

- To provide a wide range of opportunities for the development of sports skills of both the provider and the participant which embrace all facets of sport including coaching, teaching, administration, officiating and participating.

- To have AUSSIE SPORT recognised and acknowledged as making a major contribution to the provision of quality sporting experiences for young people.

- To have AUSSIE SPORT internationally recognised as providing a leading edge in terms of expanding the scope and nature of junior sport.
5.3.3 MODUS OPERANDI

AUSSIE SPORT personnel work to achieve these goals by using a range of programs, strategies and resources. There has been a conscious decision to specifically target those who influence junior sport, as well as the young people of Australia.

The areas of evaluation are matched where possible to the overall view of AUSSIE SPORT:

<table>
<thead>
<tr>
<th>Mode of Operation</th>
<th>Focus areas</th>
<th>Program area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Approach</td>
<td>School Education</td>
<td>Sportstart</td>
</tr>
<tr>
<td></td>
<td>Sport Liaison</td>
<td>Sport It!</td>
</tr>
<tr>
<td></td>
<td>Leadership</td>
<td>Ready Set Go!</td>
</tr>
<tr>
<td></td>
<td>Public Education</td>
<td>Sport Search</td>
</tr>
<tr>
<td></td>
<td>School-club partnerships</td>
<td>Active Girls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sportsfun</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CAPS</td>
</tr>
</tbody>
</table>

Each of these areas is described later in the document.

Abbreviations:
NASU = National AUSSIE SPORT Unit
SASU = State AUSSIE SPORT Unit

5.3.4 DELIVERY OF AUSSIE SPORT

AUSSIE SPORT recognises that junior sport is the shared responsibility of sporting associations and clubs, schools, departments of sport and education, community organisations, local governments, parents/guardians, sports administrators and young people themselves. AUSSIE SPORT staff highlight and support the development of junior sport by:

- raising and discussing issues;
- developing, distributing and promoting appropriate resources;
- providing people with information about AUSSIE SPORT programs;
- supporting and conducting training at the national, State and local levels.

AUSSIE SPORT personnel also act as public educators, targeting the groups and networks which deliver junior sport, helping to identify junior sport needs, and suggesting, promoting and supporting programs and strategies which can be used to address these needs. In addition, AUSSIE SPORT develops and/or promotes a range of resources which can be accessed by coaches, teachers, administrators and others involved in junior sport.
The AUSSIE SPORT strategy is to work with local communities in order to establish the most appropriate environment with infrastructure for community commitment, development and ultimately ownership of the coordination and delivery of quality junior sport. This local community focus should be supported and complemented by similar strategies at regional, State and national level.

The success of this approach will depend on the establishment of meaningful partnerships with key agencies. Through these partnerships it is envisaged that AUSSIE SPORT strategies and programs will become an integral part of the operations and policies of these agencies.

5.3.5 SASUs

One of the major ways that AUSSIE SPORT objectives are implemented is via an extensive State network (SASUs). The ASC’s relationship with SASUs is formalised by a memorandum of understanding. The SASUs have a more direct link to the community, working as facilitators with schools, parents, teachers, students, community groups, tertiary students, government groups and so on. To facilitate the AUSSIE SPORT objectives, it is essential that AUSSIE SPORT staff act predominantly as agents of change and advocates rather than take on a service delivery role or "hands on" approach.

5.3.5.1 Consultation & Advocacy

Consultation and advocacy plays a major part in achieving AUSSIE SPORT objectives. It is through consultation that many of AUSSIE SPORT’s objectives to influence and initiate change take place. This may take the form of regular meetings, annual or biannual conferences, special meetings, circulation of written material for comment and feedback, phone calls and site visits. This occurs at national, State and local level.

5.3.5.2 Liaison With Other ASC Sections and Other Professional Groups

In implementing AUSSIE SPORT’s various objectives, it is essential that the NASU works in close liaison with several other ASC sections and programs, in particular the Australian Coaching Council, Sports Management Division, Women and Sport Unit, Aussie Able, Aboriginal Program, Volunteer Management Program and the Participation Section.
5.3.6 BUDGET

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs</td>
<td>$1.2m</td>
<td>$0.521m</td>
<td>$0.648m</td>
</tr>
<tr>
<td>Development programs,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>services, resources</td>
<td>$1.1m</td>
<td>$0.84m</td>
<td>$0.76m</td>
</tr>
<tr>
<td>Program Delivery,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>administration</td>
<td>$3.0m</td>
<td>$3.1m</td>
<td>$3.1m</td>
</tr>
<tr>
<td>(ASC component, or NASU)</td>
<td>($0.675m)</td>
<td>($0.441m)</td>
<td>($0.367m)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$5.3m</td>
<td>$4.9m</td>
<td>$4.87m*</td>
</tr>
</tbody>
</table>

* Note: AUSSIE SPORT and Participation have become separate sections (since early 1994), and now have separate budgets.

5.3.7 NATIONAL AUSSIE SPORT EVALUATIONS

At present, evaluation of the CAPS program is underway, administered by an external company, "Market Attitude Research Services".

The Sport Search program is currently undergoing an internal evaluation, focusing on the servicing of schools using Sport Search and the use of demonstration schools.

Also, an Impact Evaluation of AUSSIE SPORT and operational review of AUSSIE SPORT units commenced in February 1995. The project will involve:

- an assessment of the impact that AUSSIE SPORT has made on the education and sport systems, and
- an operational review of State and National AUSSIE SPORT Units.

5.3.8 DATA COLLECTION FOR CURRENT REPORT

The AUSSIE SPORT program over the period 1986-1991 was evaluated in 1992. The report is contained in Section 6.5 of Evaluation of the Australian Sports Commission's Impact on Sports Performances and Participation in Australia. The period for the current evaluation is from 1991 to end 1994. Data are derived from a variety of sources:

- data from the SASUs are available for the complete calendar year, 1993 and 1994. Other data have been included where available;
- stock movement data from NASU are included where those figures are available, from 1993 and 1994 data;
several of the AUSSIE SPORT programs and projects have been or are in the process of being evaluated. This information is included where possible.

Sources and period of data will be indicated where possible. The following measurable outcomes include both qualitative and quantitative material.

5.3.9 MEASURABLE OUTCOMES: MODE OF OPERATION

5.3.9.1 Community Approach

Objective:

- to facilitate communities which reflect the AUSSIE SPORT ethos in both attitude and behaviour.

The community approach requires community ownership and involves working with key members of the community to facilitate change in junior sport. This means the community deciding what is important for junior sport in their local area. AUSSIE SPORT markets a range of tools - program elements and resources - which can assist the community to meet its objectives.

The role of AUSSIE SPORT staff at the local level, therefore, is that of a consultant, assisting with the community development process and facilitating the implementation and delivery of programs. As such, they are change agents, encouraging and influencing the key groups within the community to work to improve junior sport.

The SASUs operate with staff targeting particular communities, and focusing their efforts in that community. The emphasis of staff is on assisting groups within the local area to help themselves, so that the communities can become reasonably self sufficient. The AUSSIE SPORT staff are then able to move on to another community to start assisting them to implement AUSSIE SPORT.

This mode of operation is undertaken by all States and Territories, with State and regional variations as appropriate to the approach. An evaluation of the community approach is being developed in consultation with SASUs. Part of this evaluation will involve analysing just how the community approach is carried out, and what processes are involved in the myriad of different communities. The national impact evaluation to be carried out during 1995 will supplement this.

AUSSIE SPORT staff are currently working with over 166 identified communities.
5.3.10 MEASURABLE OUTCOMES: FOCUS AREAS

5.3.10.1 School Education

Objective:

- to promote the use of AUSSIE SPORT in the programs and practices of education systems and schools in order to enhance the quality of sporting experiences for young people.

National and State Education Systems

This focus involves establishing and maintaining strong working relationships with education and physical education professionals at a national level, as well as working with SASUs in this area.

Working in Schools

Includes developing and maintaining quality AUSSIE SPORT services, strategies, resources and programs appropriate to the early childhood, primary and secondary school population.

Each of the AUSSIE SPORT programs has a different focus and a number are widely implemented in schools:

- Sportstart, the early childhood program of AUSSIE SPORT, began in 1992 as a book. It is aimed at parents and caregivers and includes activity ideas and simple games to introduce children to sport through play. In late 1994, a pilot Playshop Presenter Course was conducted in Canberra. This followed the piloting of Playshop Courses for parents and caregivers in 1993.

- Sport It!, a skills based program for primary school, was launched nationally in 1993. With the support of Pizza Hut Sport It! was conducted in 46% of Australian primary schools in 1993, and by 1994 it had been implemented in 59% of Australian primary schools.

- AUSSIE SPORT's flagship program, the modified sports program, was significantly re-packaged and enhanced as a result of a sponsorship association with Kellogg's Australia. The program was re-named Ready Set Go!, supported by a Teacher Resource Pack, and complemented by additional teacher and student incentives. This was piloted, along with a new Kellogg's cereal of the same name, in WA in 1993. This sponsorship agreement is no longer in place, and during 1995, the program will be re-named the "Modified Sport Program".

Additional education related projects such as the Active Girls Campaign, Willing & Able and Sport Education in Physical Education (SEPEP) have also been developed. Available data from general activities are presented below, and program specific information from Sportstart, Sport It! and Ready Set Go! is presented in later sections.
Data from NASU

- Number of primary schools registered with AUSSIE SPORT
  
  1990
  96% (Traill & Clough research)
  
  1994
  100% (AUSSIE SPORT mailing list - also includes all secondary schools)

- Number of schools purchasing AUSSIE SPORT resources
  
  up to and including 1991
  3,600 (ASC records)
  
  1994 (only)
  979 (ASC records)

- Number of resource orders processed by NASU from schools, clubs, students, coaches etc through mail order service (not including SASU quarterly orders or free resources)
  
  up to and including 1991
  8,500 (ASC records)
  
  1994 (only)
  approximately 1,600 orders dispatched

Tertiary Sector

The School Education team also works extensively with the tertiary sector, via:

- involvement with SEPEP;
- the development and maintenance of Sportstart networks;
- attendance at four conferences based within the tertiary sector; and
- professional development and implementation of National Physical Education Statements and Profiles Workshops.

SASU Activities

Each SASU makes quarterly orders of teaching and coaching resources which they distribute in a variety of ways. In particular, free information about AUSSIE SPORT, general brochures about specific programs aimed at teachers, AUSSIE SPORT research reports and teacher resource kits such as the Active Girls material is distributed. For example, over 120,000 of the brochure Developing Young People Through Sport have been distributed in 1994 alone.

In addition, each SASU submits annual reports to NASU. These reports provide both quantitative and qualitative data. Some data from these reports include information related to work done directly with teachers and State education systems.
1991 teacher in-services teacher trainee pre-services
800 in-services to 7,000 84 pre-services to 2,000 teacher
teachers trainees

1993 approximately 400* courses 3,487 teacher trainees
approximately 7,000* teachers participated

to more than 7,106* teachers

1994 approximately 350 courses n/a (not collected - specific
approximately 350 courses breakdown not included)
to over 2,000 teachers**

* This figure is lower than for previous years, due to the changing focus of
AUSSIE SPORT. Rather than spending personnel time and resources on direct
services, the focus has shifted to become that of facilitators and advocates (see
under "Community Approach").

** Information available from only 4 states at time of printing.

Education Team Projects

- Sport Education in Physical Education Project

The SEPEP is a new approach, following a decision to explore new ways to
contribute to secondary school sport education. It involves motivating students to
undertake roles in addition to the playing of a sport, such as umpiring or acting as
team coach or manager. The sport education model brings a seasonal approach to
the teaching of sport in secondary school, rather than as isolated skill units, and has
the potential for educating children in the ethos of fair play and developing a range
of conceptual sport skills such as decision making and co-operation.

In 1993 a workshop was held with SASUs and key state physical education
representatives. As a result:

- in contract with Edith Cowan University, AUSSIE SPORT has organised and
  run workshops in each State and Territory;

- 36 schools took up SEPEP as a pilot project in 1994;

- each State pilot was driven by steering committees with AUSSIE SPORT,
  education, physical education and sport representatives.

The SEPEP pilot evaluation report is now available.
• National Curriculum Statements and Profiles

The National Collaborative Curriculum was a joint federal and State/Territory government enterprise. It followed as a result of the 1989 Hobart Declaration - an agreement made by State and Territory educators as to what should be the "common and agreed goals for schooling in Australia". The project was completed in 1993. While a national curriculum as such did not result, the documents produced as a result of the Australia-wide consultation have been adapted or adopted by most State and Territory education systems.

AUSSIE SPORT personnel contributed to the National Collaborative Curriculum consultation process by attending workshops and providing continuous feedback and comment to relevant documents. The NASU is currently working with other professional groups such as ACHPER, Deakin University, Queensland University and State Education departments to develop a wider understanding of new directions in PE. AUSSIE SPORT personnel are actively working towards positioning AUSSIE SPORT resources as documents which assist teachers to achieve desired learning outcomes for students.

• Response To Senate Inquiry

The Senate Standing Committee on Environment, Recreation and the Arts Inquiry - Physical and Sport Education - was chaired by Senator Rosemary Crowley and commenced in May 1992. It was established because numerous individuals and agencies lobbied the Government with concerns about the declining status of PE and sport in Australian schools. The ASC was one of the main instigators of the Inquiry.

During 1992, the Inquiry hearings around the country, and the more than 200 written submissions, amplified and confirmed the ASC's concerns about the place of physical and sport education in schools. All major points raised in the ASC's Submission to the Senate (written by NASU) and by ASC representatives at the hearings were reflected in the Crowley Report when tabled in December 1992.

The Report found that the quality and content in physical education, Australia-wide, had declined as a result of:

• the "crowded curriculum";

• inclusion under the broad umbrella of health education;

• lack of a coherent physical education policy in any State or Territory;

• devolution of decision making to schools;

• reduction in numbers of specialist physical education teachers;

• limited preparation of generalist teachers for physical education;
• a lack of State and Territory education department support for teachers supervising physical education;

• confusion between what is physical education, sport education and school sport; and

• the use of AUSSIE SPORT and associated sporting programs to justify the withdrawal of physical education from schools.

During 1993 various State and Federal initiatives were taken to address the issues raised by the Report. As part of her responsibility, the then Federal Minister for Sport, The Hon. Ros Kelly MP, initiated a general publicity campaign to inform the Australian public of the Crowley Report. A brochure outlining the importance of sport for children was distributed through retail stores and other agencies.

Additional information, including a summary of the findings of the Senate Standing Committee on Environment, Recreation and the Arts Report Physical and Sport Education was sent to Australian schools and parent associations, encouraging them to take practical action which might assist local schools in the provision of sound physical and sport education. This was coordinated by the ASC's AUSSIE SPORT personnel. The ASC's AUSSIE SPORT personnel were also actively involved in the Inter-Departmental Committee (IDC) which compiled the Government Response to A Report by the Senate Standing Committee on Environment, Recreation and the Arts on Physical and Sport Education. This response has been well received by key people in tertiary education and physical education. The details of this response are available from Senate Hansard 24 March 1994, and highlight many of the AUSSIE SPORT initiatives and achievements within education.

• National Junior Sport Policy

The launch of the National Junior Sport Policy in May 1994 was the culmination of much consultation with both education and sport groups. 45,000 copies were distributed to all national sporting bodies, State departments of sport and recreation, and schools.

• Willing & Able

A need was identified for support material and programs for teachers required to include a child with a disability into school physical education programs and sporting activities. This feedback came from teachers, community leaders, volunteers running sports programs, people in rehabilitation and therapy groups. Presently the only support is via a few local programs, and the manual Activities Manual for Children with Disabilities that AUSSIE SPORT currently sells (over 400 copies per year).

In June 1994 development of the new Willing & Able project commenced to address the identified needs. The supporting manual for this project is currently in a final draft form, and is the result of consultation with a range of groups involved in working with children with disabilities.
5.3.10.2 **Sporting Organisation Education**

**Objective:**

- to assist clubs and sporting organisations to develop and implement best practices in junior sport.

**NASU Role**

NASU has a role in working directly with national sporting organisations via:

- National Development Officer (NDO) workshops, with a national workshop every second year, and State-based workshops twice in each year between;

- a biannual newsletter which was expanded in 1994 to be called *News & Views*, with material from both the sports and from the ASC, and distributed to NDOs, National Coaching Directors, National Executive Directors and relevant organisations associated with sport;

- induction for NDOs (in 1994 five new NDOs spent one day with NASU, and were provided with an induction kit of information as well as ongoing liaison);

- involvement of AUSSIE SPORT staff in workshops of State sport development officers (six in 1994), with a role as a facilitator and/or presenter in areas relating to junior sport development and participation pathways for young people in that particular sport;

- co-operative work with national sporting organisations in production of sport-specific resources and endorsement of these resources (this includes use of the AUSSIE SPORT logo);

- resources produced by sport can be endorsed by AUSSIE SPORT (this includes use of the logo);

- input into ASC Co-operative Arrangements, in liaison with the Sports Management Division;

- work with an NDO Reference Group to look at specific issues in junior sport as identified at the NDO workshop in 1993;

- over 25 national sporting organisations have chosen to utilise the AUSSIE SPORT mail order service, with coaching manuals and books introducing the sport to young people being provided as AUSSIE SPORT endorsed resources. The resource catalogue is distributed in the magazine *Action* at least once a year, as well as regular updates in each issue. The individual catalogue is distributed to other inquirers (approximately 200,000 per year);
use of the magazine *Action* to publicise "best practices", and as a forum for sport; and

- sporting clubs can register directly with AUSSIE SPORT and are entered onto the mailing list.

<table>
<thead>
<tr>
<th>Registered clubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
</tr>
<tr>
<td>4,000</td>
</tr>
<tr>
<td>1994</td>
</tr>
<tr>
<td>4,500</td>
</tr>
</tbody>
</table>

**SASU Role**

The number of coaching and other courses directly organised and run by AUSSIE SPORT personnel has changed since 1991 due to a new approach of facilitation and advocacy. The focus is now one of facilitation, in encouraging people within the community to organise for themselves programs and events for young people in sport. Many courses are held where AUSSIE SPORT personnel have a non-key role. The focus on "train the trainer" type courses has contributed to sport being able to run its own courses.

SASU staff also work with State Coaching Centre Coordinators to assist with coaching courses.

<table>
<thead>
<tr>
<th>coaching courses</th>
<th>course participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991-92</td>
<td>714</td>
</tr>
<tr>
<td>1993</td>
<td>543</td>
</tr>
<tr>
<td></td>
<td>11,705</td>
</tr>
<tr>
<td></td>
<td>7,396</td>
</tr>
</tbody>
</table>

The SASUs also work to assist the State development officers, providing regular meetings, resource support, professional development opportunities, some funding and general liaison.

**Data from SASUs**

<table>
<thead>
<tr>
<th>awareness meetings for sport</th>
<th>sport in-services</th>
<th>issue-based seminars for sport</th>
<th>clubs involved</th>
<th>course participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991-92</td>
<td>37</td>
<td>165</td>
<td>-</td>
<td>258</td>
</tr>
<tr>
<td>1993</td>
<td>119</td>
<td>260</td>
<td>70</td>
<td>898</td>
</tr>
</tbody>
</table>

For 1994, there are some data available (from four states only):

- Total number of meetings (including awareness, issue based seminars and in-services) over 500
- Total number of clubs attending meetings over 800
5.3.10.3 Leadership

Objective:

- to provide opportunities for young people to develop leadership skills through sport.

Since early 1993, AUSSIE SPORT decided to extend the opportunities available for young people to develop leadership skills through sport. Initially, CAPS, Sportsfun and some State-specific projects were used as the vehicles for this. More recently, in response to the needs expressed by various communities, AUSSIE SPORT has expanded the possibilities available, by working to assist interested groups develop leadership initiatives specific to the needs of their organisation and participants.

This more flexible approach will necessitate a change in data collection in the leadership area. A national database has been developed to facilitate the collection of this information. However, details from this database are not yet available.

To enable the promotion and implementation of the Leadership approach, several support resources are in final draft form, and will be released generally in April 1995:

- *Taking a Lead: A Guide to Leadership Opportunities through Sport*, providing a guide for developing and implementing a leadership program; and

- *Multi-Sport Orientation to Coaching Coordinator's Kit*, providing a guide to organising a multi-sport orientation course, aimed particularly at sport leaders.

A brochure, *Can these young people take a lead?*, aimed at the youth audience, including the various community groups working with young people, was released in February 1995.

Details regarding the Sportsfun and CAPS components of the leadership approach are included in the next section.

5.3.10.4 Public Education

Objective:

- to increase the awareness and understanding of AUSSIE SPORT and its value, and related issues in junior sport at community, State and national level.
Public education is a vital part of the service to increase the awareness of AUSSIE SPORT philosophies. Various public education campaigns have been waged in 1993, with a variety of different approaches being used at SASU and regional level, such as shopping centre displays, Expos and Come 'n' Try days, Junior Sport Week, Fair Play Campaign, and TV, print and radio coverage. An AUSSIE SPORT advertisement produced in 1992 is played as a community service announcement in rural areas. In one State a sponsor provides the support for the playing of a “Benefits of Sport” advertisement in the metropolitan TV services.

Articles addressing various junior sport issues are on occasion submitted to relevant journals. In addition, NASU works with a number of academics to publish AUSSIE SPORT initiatives in relevant journals.

The Action magazine is distributed to 5,000 clubs, 11,500 schools, all national sporting organisations, plus information centres such as libraries and tertiary institutions, giving a total distribution of 65,000 copies. Current estimates indicate that over 250,000 people are exposed to the magazine. Certain issues of the Action magazine are used to focus on a particular theme such as parents and coaching.

A leaflet entitled Blue Brick Road was produced in late 1992 which graphically describes the AUSSIE SPORT programs, showing where they fit on the path of a young person’s development in sport/life. This brochure has been used extensively in public education.

In mid-1993 a video and supporting booklet Developing Young people Through Sport was produced, describing the new AUSSIE SPORT approach, and listing the various programs to support this. Each SASU received a broadcast quality video as well as 30 minutes of continuous tape for their use.

Nationally, a key element of public education in 1993 was the Minister’s response to the Senate Inquiry findings which included data highlighting the impact of reduced time being spent on physical education in many schools. A pamphlet was produced in response to this, entitled You can complete this picture, which was distributed with a summary of the Senate Inquiry findings and an ACHPER position statement to all schools, every school parent and citizen association, all Pizza Hut franchises, and many sports stores. There have been numerous public inquiries in response to the brochure.

A range of resources have been distributed (free of charge) both via NASU and SASU in the last 2 years:

<table>
<thead>
<tr>
<th>Codes of behaviour</th>
<th>Developing Young People through Sport (pamphlet)</th>
<th>DYPTS (Video)</th>
<th>Blue Brick Road**</th>
<th>Senate Inquiry brochure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>approx. 140,000*</td>
<td>approx. 190,000</td>
<td>approx. 800</td>
<td>approx. 60,000</td>
</tr>
</tbody>
</table>

* reviewed and reprinted in November 1994.
** reviewed and reprinted in December 1994.
In December 1994, a tender process for concept and strategies for a new Public Education campaign took place. It is envisaged that the concept will be further developed in 1995, for implementation in 1996.

5.3.10.5 School-Club Partnerships

Objective:

- to encourage and facilitate interaction and linkages between schools, clubs and associations, community groups and other agencies involved in the delivery of junior sport.

Strategies to implement this new focus area began in late 1992. Essentially, this focus area is a consultation process at national, State and local level, with some specific projects locally. These activities include:

- working with NDOs in helping them to understand and utilise the National Curriculum Profiles and Statements;
- assisting State development officers to work with schools;
- Sportslink program (NSW);
- Starter program (SA);
- Fun, Sport and Action (SA);
- Link Ages in Sport (Qld);
- development of a school-club link component of SEPEP (Development in WA);
- Sport Search program; and
- meetings between sport and schools, facilitated by AUSSIE SPORT, such as Junior Sport Assemblies and Issue based seminars (see under "Sporting Organisation Education").

A booklet, School & Clubs: ideas for working together was produced and distributed via Action magazine, (65,000 copies) and is also available as a free resource. Over 30,000 additional booklets have been distributed via SASUs, directly from NASU, and via sports who are providing them to their members.
5.3.11 SPECIFIC PROGRAM INFORMATION

Part of AUSSIE SPORT's strategic plans include the administration and coordination of various core programs. Previously, these programs were the main focus for AUSSIE SPORT activities. The focus has now shifted, whereby the programs are tools for achieving general objectives and strategic goals.

5.3.11.1 Sportstart

Sportstart was originally designed to encourage and assist parents and caregivers to provide play opportunities for children aged 3-12 years, by offering a resource about play. It recognises the importance of play in a young child's development and suggests basic movement activities that can be incorporated into this “play” approach. Since its launch in 1992, over 6,400 Sportstart manuals have been sold. In 1994, 1,335 manuals were sold.

Sportstart “Playshops” are an extension of the Sportstart program. They were piloted in eight locations throughout NSW in 1993 and targeted the 0-8 year age group. A total of 112 adult/child pairs participated. The majority of this group ranked attendance at the Playshop as worthwhile, especially those with children under five years old. Results also indicated that:

- there were marked increases in children's creative and imaginative play;
- children initiated play more often;
- children were more involved in their play;
- children were more confident in terms of skill level and peer interaction;
- adults perceived an increase in time consciously spent playing with children; and
- quality of play was enhanced.

In response to this and other feedback, the Sportstart resource will be supplemented by new initiatives to support the growing Sportstart program. In late 1994, a pilot Playshop Presenter Course was conducted in Canberra. This followed the piloting of Playshop Courses for parents and caregivers in 1993.

5.3.11.2 Sport It!

Sport It! is a primary school program which provides incentives and resources to assist teachers implement a 15-week program of basic motor skill lessons. The program was implemented in conjunction with a sponsor, Pizza Hut, meaning that many more schools received the resources than would otherwise have been possible.
The number of schools and children taking part in the Sport It! program were:

<table>
<thead>
<tr>
<th>Year</th>
<th>No. schools</th>
<th>No. children</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>3,204 (approx. 45% of all Primary Schools)</td>
<td>598,546 (approx. 44% of all Primary children)</td>
</tr>
<tr>
<td>1994</td>
<td>2,519</td>
<td>442,371</td>
</tr>
</tbody>
</table>

Schools and individuals outside the program also purchased the *Sport It! Teacher Resource Manual* (1,904 copies sold in 1994). In addition, a *Sport It! Player Skills Manual* was released as a supplement to the 1993 teacher manual (335 copies sold in 1994).

A pilot study of the effectiveness of the program showed that children enjoyed it and wanted to go on to more sport, and that they had developed useful skills and felt healthy, while teachers agreed that the program was appropriate and inclusive and that the children had become more skilful as a result of involvement (*Sport It! Evaluation*, Traill, Clough & McCormack, Feb 1993).

### 5.3.11.3 Ready Set Go! Modified Sport Program

Ready Set Go! promotes modified sport for children in both schools and sporting clubs. Developed in conjunction with national sporting organisations, it promotes over 40 modified sports, and provides support resources for teachers and coaches. In conjunction with a sponsor, Kellogg’s, a new cereal plus a free Teacher Resource Pack were piloted in Western Australia. Schools could also benefit by a promotional scheme allowing them to obtain free modified sporting equipment. In response to the offer of the free Teacher Resource Pack, 539 of approximately 800 schools in Western Australia became involved in the program.

The association with the sponsor is no longer in place, and the program will be "relaunched" in 1995 as the Modified Sport Program.

The resources from Ready Set Go! are available separately Australia-wide, and have been a valued part of many teachers' library of resources for some time.

<table>
<thead>
<tr>
<th>Year</th>
<th>Lesson Plans for Sport Leaders</th>
<th>Name of the Game pamphlet</th>
<th>Sports for Kids in small schools</th>
<th>Taking a Sport Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>286</td>
<td>16,357</td>
<td>433</td>
<td>1,641</td>
</tr>
<tr>
<td>1993*</td>
<td>437</td>
<td>27,826</td>
<td>177</td>
<td>404</td>
</tr>
<tr>
<td>1994</td>
<td>550</td>
<td>20,474</td>
<td>142</td>
<td>116</td>
</tr>
</tbody>
</table>

* In addition to those distributed free in WA.
In measuring the impact of this project, an evaluation was undertaken by Clough, McCormack and Traill, consisting of a pre- and post-test questionnaire to the students and the teachers at a sample of the schools. The most positive aspect of the post-test results showed that a greater number of modified sports were being played than were being played when the pre-test was done.

5.3.11.4 **Sport Search**

Sport Search is a sport counselling package for upper primary and secondary aged students, launched nationally in late 1993. This package includes interactive computer software materials which, when combined with a number of physical and physiological tests, help young people to make informed decisions about which sports both interest and suit them. In developing this program, Sport Search was piloted in 24 schools. These schools now operate as reference schools to assist other schools in implementing the program.

Since kits were available for sale in November 1993, over 540 have been sold (this includes both individual license plus site licenses for the software). This represents approximately 25% of all Australian secondary schools, with a conservative estimate of 250,000 students being exposed to the program. There has also been considerable interest from overseas markets and this area continues to be explored.

5.3.11.5 **Active Girls**

The Active Girls Campaign is a joint initiative of the Women and Sport Unit and AUSSIE SPORT which aims to encourage greater participation by adolescent girls in sport. AUSSIE SPORT has distributed over 150,000 items from the Active Girls kit to schools, students and the general public over the last year. AUSSIE SPORT also ensures that gender equity issues are highlighted in Action magazine and that gender inclusiveness is a program priority.

5.3.11.6 **Sportsfun**

Sportsfun is a school based leadership program that develops secondary school aged students' leadership skills and provides a supervised sport experience for primary school children. The program is conducted by secondary school leaders.

There has been a significant change to the leadership approach in the last 12 months. Specifically, there has been an extension of leadership options to include a broader range of programs. While this may result in a decline in the number of Sportsfun units, it is expected that it will result in an increase in the number of leadership programs overall.
1992  | Sportsfun Leaders: 2,800  | Sportsfun participants: over 20,000
1993  | 2,657         | 18,670
1994**| 887           | 4,674

Note: there are now more opportunities for children to become involved in other leadership programs, such as AUSSIE SPORT Leaders, CAPS and State-specific programs, which as yet are not tracked in data collection. In general, the numbers involved in leadership programs are growing.

** Includes information from four states only, at time of printing.

5.3.11.7 CAPS

CAPS (Challenge, Achievement and Pathways in Sport) is a sport based leadership development program for 14-20 year olds. It encourages the development of a variety of sport-related skills, and recognises the important role which volunteers play in sport.

The number of young people involved with CAPS has doubled since 1991, with over 2,100 participants registering in 1993 alone. They are assisted by over 371 coordinators.

<table>
<thead>
<tr>
<th>CAPS participants</th>
<th>CAPS coordinators</th>
<th>Number of sports with CAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>1,500</td>
<td>N/A</td>
</tr>
<tr>
<td>1993</td>
<td>over 2,800</td>
<td>over 450</td>
</tr>
<tr>
<td>1994*</td>
<td>over 1,500</td>
<td>over 300</td>
</tr>
</tbody>
</table>

* data from four states only
** two new sports to be added at start of 1995

In addition to the national programs, a number of SASUs have developed additional programs to cater for particular needs which have been identified in their State.

5.3.12 OTHER SPECIFIC PROJECTS

5.3.12.1 AUSSIE SPORT Experience program on site at the AIS

The AUSSIE SPORT Experience program on site at the AIS began in April 1994. It provides an opportunity for school children to experience AUSSIE SPORT programs in the unique environment of the AIS. Children take part in a choice of sports activities of several hours on one day at any time of the year, full or half day experiences during the holidays, or programs specifically tailored to the group's needs. All sporting experiences are based on the AUSSIE SPORT programs as appropriate to the age of the children involved.

Following a change in the delivery of the program in the middle of 1994, over 4,000 children took part in the program between September 1994 and March 1995, using the single day visit option. In addition, approximately 100 children per week utilised Vac Pak, a school holiday program.
5.3.13 OVERALL PARTICIPATION IN JUNIOR SPORT

Direct measurement of the number of children participating in sport around Australia is not available. Estimates can be made based on various State-specific studies, as well some Australian Bureau of Statistics figures, but there are no longitudinal or complete national cross-sectional data available.

From the most recent studies:

5.3.13.1 *Mapping of Participation Rates in Junior Sport in the ACT*, Clough & Traill, October 1992

The most frequently played sports in class time at school were modified sports or variations of them. The sports played with family or friends were completely different. Playing sport was ranked number one priority by 43% of the sample group.

Percentage of children participating:

<table>
<thead>
<tr>
<th></th>
<th>competitive interschool sport</th>
<th>competitive interclub sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>males</td>
<td>53.3%</td>
<td>54.1%</td>
</tr>
<tr>
<td>females</td>
<td>44.0%</td>
<td>37.4%</td>
</tr>
</tbody>
</table>

This study also examined reasons why children play sport, with an overwhelming majority stating “for fun”.


This study was a mapping of the participation in sporting activities of a sample of West Australian primary school aged children, comparing 1992 to 1993. Some of the results were:

- most classes in 1993 normally spent two hours or less on physical and sport education;
- there was a higher proportion of students playing the modified sports of kanga cricket, minkey, sofcrrosse and netta netball in 1993 than in 1992;
- playing sport ranked as the students’ preferred leisure activity;
- most sport was played in school time (as shown below), with little being played outside of school time:

<table>
<thead>
<tr>
<th></th>
<th>competitive interschool sport</th>
<th>competitive interclub sport</th>
</tr>
</thead>
<tbody>
<tr>
<td>males</td>
<td>39%</td>
<td>21%</td>
</tr>
<tr>
<td>females</td>
<td>34%</td>
<td>23%</td>
</tr>
</tbody>
</table>
The study also examined reasons why children play sport, with almost all students saying that playing their favourite sport was fun.

5.3.13.3 *1993 Sports Census: a Survey of State Sporting Bodies in Western Australia, Ministry of Sport & Recreation, 1993*

This study collected information from selected State sporting associations. Some general data include:

- in 1993 over 628,000 individuals registered as members, including coaches, administrators, social, officials and competitors. Over 70% of these are "active" participants (players), and 6% are directly involved in delivering the sport;

- over 130,000 participants were under 13 years old, with over 90,000 in the 13-18 age range;

- on a per capita basis, participation levels for organised sport remain higher in the country compared to the metropolitan area. One out of four people in the metropolitan area participate, while one out of three people participate in the country;

- male to female registration was 2:1, which had not changed since the 1990 census;

- there had been an increase in the range of sports played;

- 11 associations received 20% or more of their registrations through educational institutions.

5.3.13.4 *The Australian Bureau of Statistics Involvement in Sport, March 1993*

In March 1993 the ABS added supplementary questions to the Monthly Population Survey. The result is some data on the numbers and demographics of people involved in sport at some time during the 12 months ended March 1993. The study also gives information on the types of involvement, both paid and unpaid, including:

Player and non-player involvement in sport in the 15-24 year age group

<table>
<thead>
<tr>
<th></th>
<th>Players</th>
<th>Non-Players</th>
</tr>
</thead>
<tbody>
<tr>
<td>males</td>
<td>46.8%</td>
<td>10%</td>
</tr>
<tr>
<td>females</td>
<td>31.5%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

Note: Males and females are equally active in sport in the non-player category.
Some of the difficulties with the data available:

- defining sport. Is sport physical activity in general, or is it only sport as defined by the ASC?
- doubt about the reliability of information given, whether from club/sport records, or memory;
- no longitudinal data for the same group;
- lack of statistical significance on group data (tends to be just percentages, with few measures of percentage change).

The bottom line is that more data are needed as well as more accurate data. The collection of these data also need to be more organised.

5.3.14 FINDINGS

(i) There have been a number of new AUSSIE SPORT activities implemented under "Maintain the Momentum". These are:

- Sportstart, the early childhood program of AUSSIE SPORT. Since its launch in 1992, 6,400 copies of the Sportstart book have been sold;
- Sport It!, a skills based program for primary school children. Since its national launch in 1993, Sport It! has been implemented in 59% of Australian primary schools;
- AUSSIE SPORT's flagship program, the modified sports program, which was significantly enhanced and repackaged with a new name of Ready Set Go! Launched in 1993, the program has continued to grow, with more than 60,000 items from the Teacher Resource Pack sold;
- Sport Search, a sport counselling package for upper primary and lower secondary aged students which was launched nationally in late 1993. Since then 540 kits have been sold, which equates to approximately 25% of all Australian secondary schools. An estimated 250,000 students currently have the opportunity to be involved in the program;
- a public education program in 1993 which resulted in the development of a range of new resources covering codes of behaviour, a pamphlet and video on developing young people through sport, and other information materials. In total more than 400,000 of these new resources have been distributed;
a schools-clubs partnerships program which commenced in late 1992;

the new AUSSIE SPORT leaders program, which commenced in early 1993; and

the Sport Education in Physical Education project, which began in 1993 as a new way of contributing to secondary school sport education.

(ii) Another feature of the AUSSIE SPORT program has been the extension of activities that were already underway at the beginning of "Maintain the Momentum". Expansion of existing programs under "Maintain the Momentum" is highlighted by the following:

the number of primary schools registered with AUSSIE SPORT has increased from 96% in 1991 to 100 per cent by August 1994;

an increase in the number of schools purchasing AUSSIE SPORT resources;

an increase in the number of resource orders processed by the National Aussie Sport Unit;

the number of teacher in-services has increased from 800 involving 7,000 teachers in 1991 to 1,659 involving 7,106 teachers in 1993 (1994 data are incomplete);

teacher trainee pre-services increased from involving 2,000 teacher trainees in 1991 to 3,487 trainees in 1993 (1994 data are not available);

the number of clubs registered directly with AUSSIE SPORT has increased from 4,000 in 1991 to 4,500 in 1994;

in 1991 and 1992 combined there were 714 coaching courses conducted by AUSSIE SPORT involving 11,705 participants. In 1993 alone a further 543 courses were held which involved 7,396 participants (complete 1994 data are unavailable);

the number of Sportfun leaders has increased from 2,440 in 1991 to 2,657 in 1993, and the number of Sportfun participants from 15,617 to 18,670 over the same period (1994 data are incomplete); and

the number of sports involved in CAPS has grown from 18 to 21 in the last two years.
5.3.15 CONCLUSIONS

(i) There are insufficient reliable time series data to enable conclusions to be
drawn about the effectiveness of the ASC in increasing Australians’
participation in sport and sports related activities. If funding for the Population
Survey Monitor and the development of the ACoRD registration package
continue this problem will be redressed over time.

(ii) On the information available, overall participation in sport and sports activities
by Australians (which includes players/competitors, coaches, administrators and
other officials) appears to have increased.

(iii) "Maintain the Momentum" has extended AUSSIE SPORT program
developments made possible by "Next Step". ASC funding has, therefore,
contributed to a wider range of participation programs being implemented at
the community level.

(iv) There are increased opportunities for all Australians to participate in the full
range of sports activities, and at all levels of expertise.

(v) The participation programs funded directly or indirectly by the ASC have been
effective in increasing the level of participation in sport and sports activities by
Australians.

(vi) The advocacy activities of the ASC, undertaken primarily through the AUSSIE
SPORT program, have heightened awareness of the need to redress the decline
of physical and sport education in schools.
6. OVERALL FINDINGS AND CONCLUSIONS

(i) The analysis of international results from 44 national sporting organisations demonstrates that sporting performances have continued to improve under "Maintain the Momentum". At a time when international sport is becoming increasingly more competitive, the analysis indicates that Australian athletes have built on the tremendous gains made during the period of "Next Step" funding, with improvements in both absolute results and the depth of performances.

(ii) In terms of the relationship between ASC funding to sports and international performance, there appears to be a strong link between the level of funding provided to sports, the consistency of funding levels, and the sport's international competition performances. Performances have improved while overall funding levels have increased, however as a general rule, those sports that have received funding increases coupled with a consistent or regular funding pattern have demonstrated greater performance improvements than those sports that have received low levels and/or highly variable or fluctuating annual funding. When funding to sports has declined, performances have declined.

(iii) The evaluation also provides evidence (via the ASC's AUSSIE SPORT and Australian Coaching Council programs) that participating levels have also increased under the "Maintain the Momentum" program. Key participation indicators from these programs, such as coach accreditations, new initiatives, acceptance and implementation of activities by schools, resource sales and training programs demonstrate the degree to which Australians now have greater opportunities to be involved in quality sports programs.

(iv) As identified in the evaluation of the ASC in 1992, there are no reliable longitudinal or time series data on national sports participation levels or factors contributing to participation, covering the period since 1975. The ASC has taken steps to address this through the development of a computerised registration package for national sporting organisations (ACoRD) and surveying Australians about participation in sports activities through the Population Survey Monitor conducted by the Australian Bureau of Statistics.

(v) In an overall sense, the evaluation shows that under "Maintain the Momentum" the ASC has clearly continued to meet its two objectives of excellence in sports performance and increased participation in sport and sports activities by Australians.
## ANALYSIS OF INTERNATIONAL SPORTS PERFORMANCES 1976 TO 1994

<table>
<thead>
<tr>
<th>Sport</th>
<th>Performances since 1976</th>
<th>Performances since &quot;Next Step&quot;</th>
<th>Performances since &quot;Maintain the Momentum&quot;</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archery</td>
<td>Declined</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Trend is variable for different categories (men's, women's, etc).</td>
</tr>
<tr>
<td>Athletics</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Badminton</td>
<td>Improved</td>
<td>Improved</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Baseball</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td>Recent improvements have been marginal.</td>
</tr>
<tr>
<td>Basketball</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td>Main improvement in senior and junior women's.</td>
</tr>
<tr>
<td>Boxing</td>
<td>Improved</td>
<td>Maintained</td>
<td>n/a</td>
<td>No major post-1992 tournaments have been held.</td>
</tr>
<tr>
<td>Canoeing</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td>Improvements overall although some variation within disciplines.</td>
</tr>
<tr>
<td>Cricket</td>
<td>Maintained</td>
<td>Improved</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>Cycling</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td>General improvement in virtually all disciplines.</td>
</tr>
<tr>
<td>Sport</td>
<td>Performances since 1976</td>
<td>Performances since &quot;Next Step&quot;</td>
<td>Performances since &quot;Maintain the Momentum&quot;</td>
<td>Comment</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------</td>
<td>--------------------------------</td>
<td>---------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Diving</td>
<td>Improved</td>
<td>Improved</td>
<td>Maintained</td>
<td>Main recent improvement in men's diving</td>
</tr>
<tr>
<td>Equestrian</td>
<td>Improved</td>
<td>Improved</td>
<td>Maintained</td>
<td>High levels established in 1992.</td>
</tr>
<tr>
<td>Fencing</td>
<td>Declined</td>
<td>Improved</td>
<td>Maintained</td>
<td>Sport has remained at a high performance level.</td>
</tr>
<tr>
<td>Golf</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Major improvement areas now men's and rhythmic gymnastics.</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>Handball</td>
<td>Insufficient time series results to establish any trend.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hockey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- men</td>
<td>Improved</td>
<td>Improved</td>
<td>Maintained</td>
<td>Performance levels have been consistently high.</td>
</tr>
<tr>
<td>- women</td>
<td>Improved</td>
<td>Maintained</td>
<td>Improved</td>
<td>Some variation within disciplines.</td>
</tr>
<tr>
<td>Ice Skating</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Judo</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Sport</td>
<td>Performances since 1976</td>
<td>Performances since &quot;Next Step&quot;</td>
<td>Performances since &quot;Maintain the Momentum&quot;</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Modern Pentathlon</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td>No scope for improvement in terms of placings.</td>
</tr>
<tr>
<td>Netball</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Orienteering</td>
<td>Declined</td>
<td>Maintained</td>
<td>Maintained</td>
<td>There has been recent improvement at junior level.</td>
</tr>
<tr>
<td>Rowing</td>
<td>Improved</td>
<td>Improved</td>
<td>Maintained</td>
<td>Junior results continue to improve.</td>
</tr>
<tr>
<td>Rugby Union</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>Shooting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Clay Target</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>- Pistol</td>
<td>Improved</td>
<td>Improved</td>
<td>Maintained</td>
<td>No representation at Barcelona and 1994 World Championships results currently unavailable.</td>
</tr>
<tr>
<td>- Running target</td>
<td>Declined</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>- Smallbore</td>
<td>Improved</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Snow Skiing</td>
<td>Maintained</td>
<td>Improved</td>
<td>Improved</td>
<td>Major improvements in freestyle results.</td>
</tr>
<tr>
<td>Sport</td>
<td>Performances since 1976</td>
<td>Performances since &quot;Next Step&quot;</td>
<td>Performances since &quot;Maintain the Momentum&quot;</td>
<td>Comment</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------</td>
<td>--------------------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Soccer</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>- men</td>
<td>Insufficient time series results to establish any trend.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- women</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Softball</td>
<td>Improved</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Squash</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td>Performance levels have historically been very high - little scope for improvement.</td>
</tr>
<tr>
<td>Synchronised swimming</td>
<td>Declined</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Table tennis</td>
<td>Declined</td>
<td>Maintained</td>
<td>Declined</td>
<td>Recent women's results have improved, while men's results have declined.</td>
</tr>
<tr>
<td>Tennis</td>
<td>Declined</td>
<td>Maintained</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>Triathlon</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>Volleyball</td>
<td>Maintained</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Water polo</td>
<td>Improved</td>
<td>Improved</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Weightlifting</td>
<td>Improved</td>
<td>Improved</td>
<td>Improved</td>
<td></td>
</tr>
<tr>
<td>Sport</td>
<td>Performances since 1976</td>
<td>Performances since &quot;Next Step&quot;</td>
<td>Performances since &quot;Maintain the Momentum&quot;</td>
<td>Comment</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>Wheelchair</td>
<td>Improved</td>
<td>Improved</td>
<td>n/a</td>
<td>No major competition since 1992.</td>
</tr>
<tr>
<td>Wrestling</td>
<td>Improved</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
<tr>
<td>Yachting</td>
<td>Improved</td>
<td>Maintained</td>
<td>Maintained</td>
<td></td>
</tr>
</tbody>
</table>