



IRB WOMEN'S RUGBY WORLD CUP 2010

STATISTICAL REVIEW AND MATCH ANALYSIS

IRB GAME ANALYSIS



SUMMARY

The report does the following:

- 1 it reflects the shape of the women's game as played in 2010 IRB Women's Rugby World Cup.
- 2 it shows any changes in the shape of the game compared with the 2006 IRB Women's Rugby World Cup.
- 3 it provides a basis whereby each participating country can compare its performance in major areas of the game with the other teams that played in the competition as well as perhaps being used to establish benchmarks and performance indicators for future tournaments.





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COMMENTARY

Womens Rugby World Cup is a competition that, in its later years, has been dominated by just two teams – **New Zealand** and **England**. This year – 2010 – was no exception. Both in the number of points scored and conceded, these two teams clearly outstripped the other 10 teams.



The extent of this domination is seen when looking at the points margins in the matches played by the two teams in the last 3 Womens World Cup tournaments. The following table illustrates this by listing the winning margins in all matches played by **New Zealand** and **England** in the last 3 tournaments but excluding the 3 finals where they played each other.

WINNING MARGINS

 NEW ZEALAND	 ENGLAND
117	82
59	66
52	54
50	43
38	27
33	27
33	19
30	18
30	15
27	8
21	6










The table shows that even the most competitive game played by **New Zealand** in the three tournaments, still resulted in a favourable points margin of 21. **England's** results have not been quite as comprehensive with 5 of their 11 matches producing points margins of less than 21. The three finals however have all been very close matches, producing scores of 19 - 9, 25 – 17 and 13 – 10.

This competitiveness is also reflected in matches played by the remaining 10 teams in the tournament when they play each other. While the challenge posed by **New Zealand** and **England** has been impossible to surmount, there remains a highly competitive edge to most of the remaining matches. As an illustration of this, in this year's competition there were 3 occasions when some countries played each other twice. While **Canada** beat **Scotland** in both their matches, **Wales** lost and won against **South Africa** and the **USA** lost and won against **Ireland**. Most matches therefore contained an element of unpredictability, which is a sought for element in any competition.

This unpredictability can also be illustrated when looking at the playing records at recent World Cups of the teams participating in this year's tournament with the exception of

Sweden who were in the competition for the first time. The results show that no team loses only when it plays against **New Zealand** and **England**. The degree of competition ensures that on most occasions, teams cannot expect an automatic win.

The table below, which shows the win/loss ratio of teams other than **New Zealand** and **England** over recent tournaments, illustrates this:

		Wins	Losses
	AUSTRALIA	9	6
	FRANCE	9	5
	USA	8	6
	CANADA	7	7
	IRELAND	6	8
	SCOTLAND	6	8
	WALES	4	5
	KAZAKHSTAN	4	10
	SOUTH AFRICA	2	8

Between WRWC 2002 and 2006, the shape of the women's game changed. In 2002, the ball in play time was noticeably less than that seen in the mens game; the mens game was more attritional with around 40% more rucks passes and kicks and was played at a far greater pace.

Such differences no longer apply. The change that came about at the time of the last WRWC continued into WRWC 2010 so that the shape of the game is now similar in almost all respects to that seen at the highest levels of men's rugby.

There is however one major exception – and that is in the area of kicking. Kicks at goal are far fewer, success rates are less and open play kicks from hand are less frequent. The differences are substantial and are illustrated through a comparison with RWC 2007:

	WRWC 2010	RWC 2007
Penalty goal attempts	74 in 30 matches	238 in 48 matches
Penalty goals – average no per game	1.2	3.7
Penalty goal success rate	47%	72%
Conversion success rate	49%	71%
Conversion success rate in front of posts	97%	100%
Conversion success rate between posts & 15m	55%	94%
Conversion success rate 15m to touchline	29%	51%
Drop goals attempted	3 in 30 matches	83 in 48 matches
Successful drop goals	none	14
Average Kicks from hand	33 per game	56 per game

The kicking statistics listed are a verifiable exercise in performance and comparison. They cannot measure fully however, the actual impact on the women's game of such a fragility in this area of play. If the quality of kicking could be improved, clear benefits would accrue – there would be more effective clearance kicks at defensive positions, and more options in attack. The area of kicking therefore provides a challenge to both coach and player.



The above data – and the performance of each country in every major constituent element of the game is recorded in the attached report. It shows for example, that













- **Canada** was the only team not to score a try from lineout possession
- **USA** scored 60% of their tries from possession gained from inside their own half, compared to **Australia** who scored just 6%
- In one game, **Kazakhstan** made only 3 kicks
- **Wales** were penalised less than their opponents in all of 5 of their matches
- **South Africa** had less possession than their opponents in all 5 matches
- **Scotland's** forwards were the forwards the least likely to pass the ball
- All **England's** restarts were kicked long – none were contestable
- **Sweden** was the only team who kicked more penalty goals than tries
- **Ireland and France** had kick success rate of 30% and 22%, the two lowest in the competition
- **New Zealand** had the most success on both their own lineout and their opponents lineout.

All these facts – and many others - are contained in the following sections.




POOL RESULTS













POOL A

	WALES	12 - 26	AUSTRALIA	
	NEW ZEALAND	55 - 3	SOUTH AFRICA	
	WALES	10 - 15	SOUTH AFRICA	
	NEW ZEALAND	32 - 5	AUSTRALIA	
	NEW ZEALAND	41 - 8	WALES	
	AUSTRALIA	62 - 0	SOUTH AFRICA	





POOL B





	USA	51 - 0	KAZAKHSTAN	
	ENGLAND	27 - 0	IRELAND	
	USA	12 - 22	IRELAND	
	ENGLAND	82 - 0	KAZAKHSTAN	
	IRELAND	37 - 3	KAZAKHSTAN	
	ENGLAND	37 - 10	USA	





POOL C

	CANADA	37 - 10	SCOTLAND	
	FRANCE	15 - 9	SWEDEN	
	FRANCE	17 - 7	SCOTLAND	
	CANADA	40 - 10	SWEDEN	
	SCOTLAND	32 - 5	SWEDEN	
	FRANCE	32 - 8	CANADA	

POOL STANDINGS

		P	W	D	L	PF	PA	TF	TA	BP	PTS
	NEW ZEALAND	3	3	0	0	128	16	22	2	3	15
	AUSTRALIA	3	2	0	1	93	44	14	8	2	10
	SOUTH AFRICA	3	1	0	2	18	127	3	19	0	4
	WALES	3	0	0	3	30	82	4	14	1	1










		P	W	D	L	PF	PA	TF	TA	BP	PTS
	ENGLAND	3	3	0	0	146	10	22	2	3	15
	IRELAND	3	2	0	1	59	42	11	6	2	10
	USA	3	1	0	2	73	59	11	10	1	5
	KAZAKHSTAN	3	0	0	3	3	170	0	26	0	0

		P	W	D	L	PF	PA	TF	TA	BP	PTS
	FRANCE	3	3	0	0	55	24	10	2	1	13
	CANADA	3	2	0	1	85	43	12	7	2	10
	SCOTLAND	3	1	0	2	49	59	8	9	1	5
	SWEDEN	3	0	0	3	24	87	2	14	1	1













P=Played W=Won D=Draw L=Lost PF=Points For PA=Points Against
TF=Tries For TA=Tries Against BP=Bonus Points PTS=Points

PLAY OFF RESULTS

SEMI FINALS

	SOUTH AFRICA	25 - 10	KAZAKHSTAN	
	WALES	32 - 10	SWEDEN	
	CANADA	41 - 0	SCOTLAND	
	IRELAND	3 - 40	USA	
	NEW ZEALAND	45 - 7	FRANCE	
	ENGLAND	15 - 0	AUSTRALIA	

FINALS

	SWEDEN	8 - 12	KAZAKHSTAN	
	WALES	29 - 17	SOUTH AFRICA	
	IRELAND	32 - 8	SCOTLAND	
	USA	23 - 20	CANADA	
	FRANCE	8 - 22	AUSTRALIA	
	NEW ZEALAND	13 - 10	ENGLAND	



FINAL STANDINGS

2010 WRWC

2006 WRWC

1 st		NEW ZEALAND	1 st
2 nd		ENGLAND	2 nd
3 rd		AUSTRALIA	7 th
4 th		FRANCE	3 rd
5 th		USA	5 th
6 th		CANADA	4 th
7 th		IRELAND	8 th
8 th		SCOTLAND	6 th
9 th		WALES	-
10 th		SOUTH AFRICA	12 th
11 th		KAZAKHSTAN	11 th
12 th		SWEDEN	-



PLAYER STATISTICS

TOP POINT SCORERS

Kelly Brazier	New Zealand	48
Anna Schnell	Canada	46
Christy Ringgenberg	USA	44
Carla Hohepa	New Zealand	35
Katy McLean	England	35

TOP TRY SCORERS

Carla Hohepa	New Zealand	7
Heather Moyse	Canada	7
Charlotte Barras	England	4
Kelly Brazier	New Zealand	4
Niamh Briggs	Ireland	4



Kelly Brazier, NZL



Carla Hohepa, NZL



OVERALL SUMMARY

The following data comes from the detailed report that follows and reflects in summary form the shape of the game as expressed through WRWC 2010.

	WRWC 2010	WRWC 2006	WRWC 2002
Av POINTS per game	40	39	40
Av TRIES per game	6.1	6.0	5.7
Av PENALTY GOALS per game	1.2	1.0	2.3
Av DROP GOALS per game	none	1 in 30 matches	1 in 32 matches
% of points from TRIES	76%	76%	72%
% of Tries scored by BACKS	72%	n/a	n/a
% of Tries scored by FORWARDS	28%	n/a	n/a
% of PENALTY TRIES scored	-	n/a	n/a
MATCHES with points margin of 20 or less	43%	54%	46%
MATCHES won by team scoring most tries	29 of 30	24 of 30	30 of 32
MATCHES where tries were equal	1	4	1
MATCHES won by team scoring least tries	none	1	1
CONVERSION success %	49%	53%	39%
PENALTY GOAL success %	47%	54%	63%
Total DROP GOALS	none	1	1
% of tries scored from OWN LINEOUT	27%	26%	27%
% of tries scored from OWN SCRUM	26%	22%	18%
% of tries scored from PENALTY/FREE KICKS	15%	15%	19%
% of tries scored from TURNOVER/ERROR	11%	13%	9%
% of tries scored from OWN HALF	23%	20%	7%
Av PASSES per game	239	220	205
Av KICKS per game	33	43	40
Av RUCKS/MAULS per game	161	131	98
RUCK/MAUL success %	93%	87%	
Av BALL IN PLAY TIME	44%	41%	36%
% of all PASSES MADE BY BACKS	40%	42%	n/a
% of all PASSES MADE BY SCRUM HALF	46%	43%	n/a
% of all PASSES MADE BY FORWARDS	14%	15%	n/a
Av LINEOUTS per game	26	31	28
LINEOUT success %	76%	73%	73%
Av SCRUMS per game	24	28	22
SCRUM success %	87%	89%	95%
Av PENALTIES/FREE KICKS per game	25	24	33
Total YELLOW and RED CARDS	2 – red 64 – yellow	0 red 18 yellow	1 red 53 yellow

1.0 SCORING

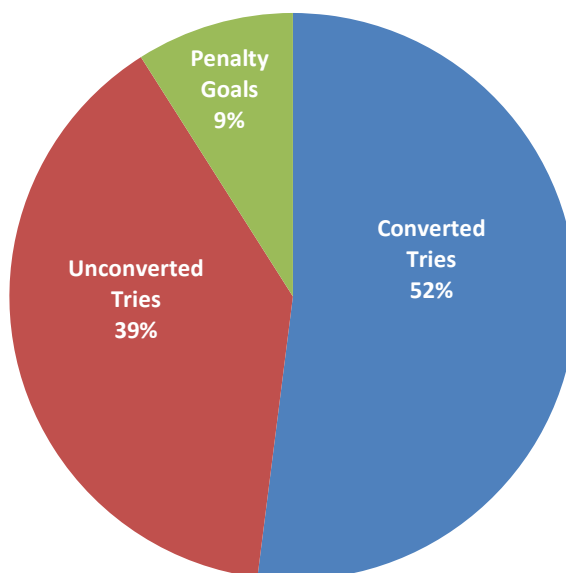
There were **1193** points scored in the 30 matches played, giving an average of **40** points per game (WRWC 2006 – 39). They were made up as follows:

Type of Score	Total	Points
Converted Tries	89	623
Unconverted Tries	93	465
Penalty Goals	35	105
Drop Goals	0	0
Total		1193

76% came from TRIES
9% came from PENALTY GOALS
15% came from CONVERSIONS
0% came from DROP GOALS



Points Makeup



1.1 WINNING MARGINS

The winning margins in each of the 30 matches fell into the following ranges:

Points Difference in WRWC 2010

Points Difference	No of matches	Cumulative	WRWC 2006
0 – 5	4	13%	20%
6 – 10	3	23%	30%
11 – 20	6	43%	54%
21 – 30	8	70%	67%
31 – 40	4	83%	80%
41 – 50	1	87%	87%
50+	4	100%	100%

In 30 matches, there were 7 matches (36%) that had a scoring margin of 10 or less points. There were 4 matches with a margin of 50+ points (*England v Kazakhstan, Australia v South Africa, New Zealand v South Africa and USA v Kazakhstan*).

Not surprisingly, points scored and conceded varied considerably - and the total and average points scored and conceded by each team are shown below:

		Points for			Points against		
		WRWC 2010	WRWC 2010	WRWC 2006	WRWC 2010	WRWC 2010	WRWC 2006
		TOTAL	AVERAGE	AVERAGE	TOTAL	AVERAGE	AVERAGE
	NZL	186	37	40	33	7	7
	ENG	171	34	31	23	5	11
	CAN	146	29	31	66	13	22
	USA	136	27	17	82	16	9
	AUS	115	23	23	67	13	18
	IRE	94	19	14	90	18	19
	WAL	91	18	-	109	22	-
	FRA	70	14	20	91	18	17
	RSA	60	12	6	166	33	52
	SCO	57	11	13	132	26	14
	SWE	42	8		131	26	
	KAZ	25	5	15	203	41	23

1.2 PENALTY GOALS

There were **35** penalty goals kicked in the tournament, an average of **1.2** per game. (WRWC 2006 – 1.0)

Sweden was the only team that scored more penalty goals than tries.

1.3 IMPACT OF THE PENALTY GOAL ON MATCH RESULTS

Tries win matches - in WRWC 2010, **the winning team scored the most tries in 29 of the 30 matches or in 87% (WRWC 2006 – 90%)**.

In the other game, the final between **New Zealand** and **England**, tries were equal at one each.

	Penalties Goals Kicked	Ratio PGs : Tries
SWE	6	1 : 0.7
CAN	6	1 : 3
ENG	4	1 : 6
USA	4	1 : 5
RSA	3	1 : 3
FRA	2	1 : 6
NZL	2	1 : 8
IRE	2	1 : 8
WAL	2	1 : 8
SCO	2	1 : 5
KAZ	1	1 : 4
AUS	1	1 : 18

2.0 TRY SCORING













There were 182 tries scored in 2010 WRWC

	WRWC 2010	WRWC 2006
Average Tries per game	6.1	6.0
Most Tries in one game	11	13
Least Tries in one game	2	2

The total number of tries, penalty goals and drop goals scored by each country in WRWC 2010 was as follows:















Total Tries / Penalty Goals / Drop goals per Team & % of points from Tries and Kicks per Team

		Tries	Penalty Goals	Drop Goals	% of points from Tries	% of points from Kicks
	NZL	30	2	0	81%	19%
	ENG	25	4	0	73%	27%
	CAN	20	6	0	68%	32%
	USA	20	4	0	74%	26%
	AUS	18	1	0	78%	22%
	IRE	16	2	0	85%	15%
	WAL	15	2	0	82%	18%
	FRA	12	2	0	86%	14%
	SCO	9	2	0	79%	21%
	RSA	9	3	0	75%	25%
	KAZ	4	1	0	80%	20%
	SWE	4	6	0	48%	52%

2.1 RATE OF TRY SCORING

An earlier table shows the number of tries scored by each country. The table does not show however how effective each team was in scoring tries in relation to the possession that it obtained. A team may obtain little possession but still manage to score a significant number of tries. The following paragraphs consider this and attempt to show how successful each team was in converting possession into tries.

This was done by adding together the time each team was in possession of the ball in each of the matches played and then dividing it by the number of tries scored. The result then gave a rate of try scoring – or a measure of how effective each country was in converting possession into tries.

		Total Tries Scored	Try scoring rate WRWC 2010	Try scoring rate WRWC 2006
	NZL	30	1 try every 2m 59secs	1 try every 2m 56secs
	CAN	20	3m 29secs	3m 12secs
	ENG	25	4m 06secs	4m 09secs
	USA	20	4m 09secs	5m 18secs
	AUS	18	5m 02secs	14m 50sec*
	IRE	16	5m 41secs	7m 07secs
	WAL	15	6m 49secs	
	FRA	12	7m 19secs	5m 06secs
	RSA	9	8m 16secs	18m 13secs*
	SCO	9	10m 30secs	9m 03secs
	KAZ	4	21m 00secs	6m 36secs
	SWE	4	23m 37secs	

*excludes match between Australia (10 tries) and S Africa (2 tries).

2.2 RATE OF TRY CONCEDED

Following the above exercise, the converse was looked at ie. how effective was each team in restricting tries in relation to the possession that their opponents obtained. The following paragraph tries to measure this by illustrating how successful each team was in preventing their opposition from converting possession into tries.

This was done by adding together the total time the team's opponents were in possession of the ball - and then dividing it by the number of tries conceded. The result then gave a rate of try scoring by the opposition. As an illustration of this, **Canada**, despite finishing in 6th position, had the third best defensive record in the tournament, conceding just one try for every 9min 00secs possession by their opponents.













		Total tries conceded	Try conceding rate WRWC 2010	Try conceding rate WRWC 2006
	ENG	3	1 try every 30m 31secs	1 try every 8m 32secs
	NZL	4	21m 12secs	14m 07secs
	CAN	10	9m 00secs	5m 12secs
	AUS	11	7m 22secs	5m 05secs
	USA	12	7m 12secs	19m 14secs*
	IRE	13	6m 23secs	6m 05secs
	FRA	13	6m 44secs	6m 41secs
	SWE	22	4m 31secs	
	RSA	26	4m 03secs	2m 13secs*
	SCO	20	4m 01secs	7m 01secs
	WAL	18	3m 55secs	
	KAZ	30	3m 26secs	4m 54secs

*excludes match between Australia (10 tries) and S Africa (2 tries).

2.3 PLAYERS AND TRIES

It has been noted above that there were **182** tries scored in the 30 matches:

131 or **72%** of tries were scored by Backs and **51** or **28%** of tries were scored by Forwards - The breakdown between the 12 competing teams is shown in the attached table

		Tries by Backs	Tries by Forwards	Total
	NZL	23	7	30
	ENG	20	5	25
	CAN	17	3	20
	USA	18	2	20
	AUS	12	6	18
	IRE	9	7	16
	WAL	9	6	15
	FRA	4	8	12
	RSA	8	1	9
	SCO	5	4	9
	KAZ	2	2	4
	SWE	4	0	4
		131	51	182

3.0 TRY SCORING

3.1 SOURCE OF TRIES

The teams scoring the tries obtained possession of the ball prior to the scoring of the try from a variety of sources. The source of possession from which tries were scored was as follows:

	WRWC 2010	WRWC 2006
Lineout – Own	27%	26%
Scrum –Own	26%	22%
Turnover/Handling Error	11%	13%
Opponents Kick	13%	10%
Penalty/Free Kick	15%	15%
Lineout - Opp	2%	5%
Restart – Opp	5%	5%
Scrum – Opp	1%	4%



The following table shows the possession source from which tries were scored by the 12 teams. This table shows that **Canada** was the only team not to score a try from lineout possession

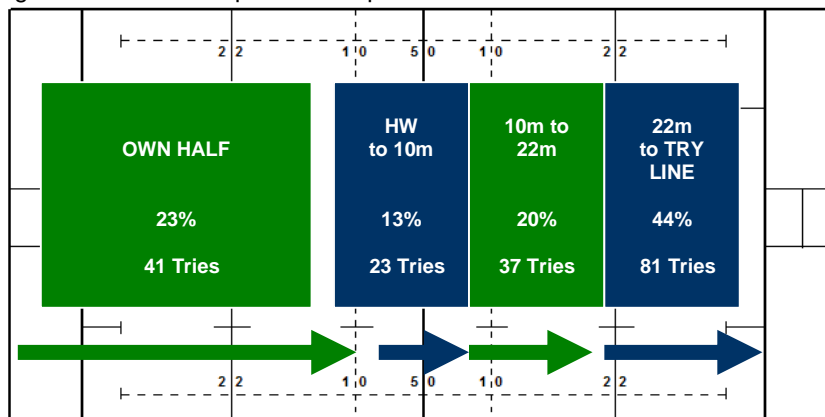
		Lineout	Scrum	Pen/ FK	Kick	Turnover	Restart	Total Scored
	NZL	9	7	3	4	4	3	30
	ENG	9	6	4	1	5		25
	CAN		9	2	4	3	2	20
	USA	2	7	5	3	2	1	20
	AUS	9	6		2	1		18
	IRE	6	1	4	1	3	1	16
	WAL	4	5	1	3		2	15
	FRA	5	2	4		1		12
	SCO	5	1		2	1		9
	RSA	1	3	3	2			9
	KAZ	1	2	1				4
	SWE	1	1	1	1			4

The next table shows the possession source from which their opponent's tries came:

		Lineout	Scrum	Pen/ FK	Kick	Turnover	Restart	Total Conceded
	ENG	1	1	1				3
	NZL	1	1	1	1			4
	CAN	4		2	3	1		10
	AUS	4	3	2		2		11
	USA	4	2	3	1	2		12
	FRA	4	5	1	1	1	1	13
	IRE	4	5	1	1	2		13
	WAL	6	5	3	2		2	18
	SCO	3	5	2	4	3	3	20
	SWE	5	9	3	4	1		21
	RSA	9	7	1	5	2	2	26
	KAZ	7	7	8	1	6	1	30

3.2 ORIGIN OF TRIES

Tries originate from various parts of the pitch – this is illustrated below:



The origin is that point on the pitch where the team scoring last obtained possession before scoring a try.

		Own Half	Halfway to 10m	10m to 22m	22m to Try-line	Total Scored
	NZL	7	5	5	13	30
	ENG	2	2	10	11	25
	CAN	7	4	5	4	20
	USA	12	1	2	5	20
	AUS	1	2	6	9	18
	IRE	3	2	3	8	16
	WAL	3	3	2	7	15
	FRA		2	1	9	12
	SCO	2	1	2	4	9
	RSA	3		1	5	9
	KAZ	1			3	4
	SWE		1		3	4

The above table shows some major contrasts. For example - while the **USA** scored 12 – or 60% - of its 20 tries from possession gained from inside their own half, **Australia** scored just 1 – or 6%.

The following table provides the converse to the above ie. it shows – for each team – the origin of all tries conceded..

		Opp Half	Halfway to 10m	10m to 22m	22m to Try-line	Total Conceded
	NZL			2	2	4
	FRA	2	3	2	6	13
	IRE	4		2	7	13
	WAL	5	1	5	7	18
	ENG	1		1	1	3
	RSA	5	3	5	13	26
	AUS		2		9	11
	CAN	3	3		4	10
	SWE	6	3	4	9	22
	KAZ	9	3	6	12	30
	USA	1		5	6	12
	SCO	5	5	5	5	20

3.3 TRY LOCATIONS

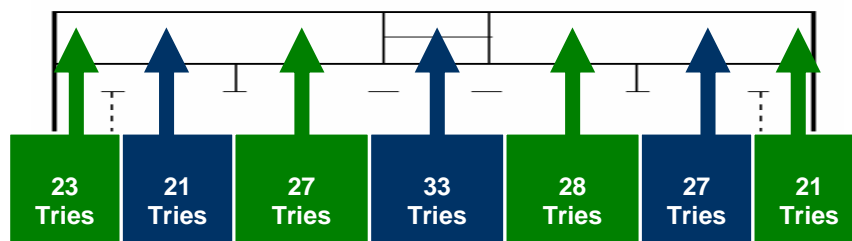
The chart below indicates where across the goal-line tries were scored. It shows that:

18% were scored under the posts

40% the left side of the posts

42% on the right side of the posts

Overall position of tries scored (%)



3.4 BUILD-UP TO TRIES

Possession of the ball that leads to tries is obtained from a number of sources – and they are listed above. More often than not, other actions – second phase, kicks and passes – then take place before the try is scored.

The tables below show the number of rucks and mauls (2nd phase) and the number of passes that preceded each of the **182** tries

Build Up to Tries - Ruck/Mauls				Build Up to Tries - Passes			
	Number	%	Cumulative %		Number	%	Cumulative %
0 R/Ms	48	26%	26%	0 pass	28	15%	15%
1 R/Ms	54	30%	56%	1 pass	16	9%	24%
2 R/Ms	28	15%	71%	2 passes	20	11%	35%
3 R/Ms	21	12%	83%	3 passes	25	14%	49%
4 R/Ms	9	5%		4 passes	29	16%	
5 R/Ms	9	5%		5 passes	18	10%	
6 R/Ms	3	2%		6 passes	13	7%	
7 R/Ms	5	3%		7 passes	9	5%	
8 R/Ms	4	2%		8 passes	4	2%	
9 R/Ms	0	-		9 passes	4	2%	
10+ R/Ms	1	>1%		10 +passes	16	9%	
Total	182			Total	182	100%	

The first table shows that **83%** of tries were preceded by 3 or fewer second phases.

The second table shows that **49%** of tries were preceded by 3 or fewer passes.

3.5 TIMING OF SCORES

53% of tries were scored in the first half - **47%** in the second half. There was a difference between the time when tries were scored and the time when penalties were kicked. While 53% of tries were scored in the first half, the equivalent first half penalty count was **71%**. In **Kazakhstan's** case, all 6 of their penalty goals were kicked in the first half. The following table breaks down these figures further and shows the halves in which teams scored tries and penalty goals and the halves in which they conceded tries and penalty goals.

		Tries				Penalty goals			
		1 st Half Tries scored	2 nd Half Tries scored	1 st Half Tries conceded	2 nd Half Tries conceded	1 st Half PGs Scored	2 nd Half PGs Scored	1 st Half PGs conceded	2 nd Half PGs conceded
	NZL	19	11	2	2	0	2	1	2
	ENG	13	12	2	1	1	3	0	2
	CAN	13	7	4	6	4	2	4	0
	USA	7	13	7	5	4	0	3	1
	AUS	11	7	6	5	1	0	1	1
	IRE	8	8	7	6	2	0	2	1
	WAL	7	8	8	10	1	1	1	0
	FRA	8	4	10	3	2	0	4	0
	SCO	4	5	11	9	2	0	3	1
	RSA	3	6	14	12	1	2	1	1
	KAZ	3	1	12	18	1	0	4	1
	SWE	1	3	14	8	6	0	1	0













4.0 KICKS AT GOAL

The kicking success for **penalty goals, conversions and drop kicks** of each of the participating countries is shown below.

Conversions
Penalty goals
Drop goals

2010 WRWC
49%
47%
0 from 3

The table gives the kicking success rate of each participating team. The percentages should however only be regarded as indicative since success depends on a number of factors. Some tries are scored near the touchline – others under the post. Further, when few kicks at goal are taken, the success or failure of relatively few can have a disproportionate effect on percentages. Certain teams may take tap penalties, scrums and lineouts instead of eminently kickable penalties. Other teams may choose to kick for goal whenever 3 points are more or less guaranteed. The table should therefore be looked at within such potential constraints.

		Conversion Success %	Penalty Success %	Overall Success %	Drop goal Success
	CAN	70%	67%	69%	0/0
	ENG	68%	50%	64%	0/0
	USA	60%	80%	64%	0/0
	AUS	61%	50%	60%	0/0
	SWE	50%	50%	50%	0/0
	NZL	50%	29%	46%	0/0
	SCO	33%	50%	38%	0/1
	RSA	33%	33%	33%	0/0
	WAL	33%	33%	33%	0/0
	KAZ	25%	50%	33%	0/0
	IRE	25%	50%	30%	0/1
	FRA	17%	33%	22%	0/1

There was not a single drop goal success in any of the 30 matches.



5.0 BALL IN PLAY

In percentage terms, WRWC 2010 matches produced an average ball in play time of **35 min 27 secs or 44%**

	WRWC 2010	WRWC 2006
Average B-I-P per game	44%	41%
Highest B-I-P in one game	57%	46%
Lowest B-I-P in one game	35%	34%

The following table shows the ball in play percentage and ball in play time for each match and it also includes how much possession (%) was obtained by each team in the 30 matches. It can be seen that the winning team did not always have the most possession. In 12 of the 30 matches – or 40% - the winning team had the least possession.

BALL IN PLAY %	BALL IN PLAY TIME	WINNING TEAM	%	LOSING TEAM	%
57%	45m 19s	Kazakhstan	43%	Sweden	57%
52%	41m 35s	England	54%	Australia	46%
52%	41m 25s	Wales	58%	South Africa	42%
50%	40m 04s	England	56%	USA	44%
50%	39m 43s	Scotland	52%	Sweden	48%
49%	39m 10s	France	60%	Sweden	40%
49%	38m 52s	New Zealand	54%	England	46%
47%	37m 33s	England	56%	Kazakhstan	44%
46%	36m 50s	South Africa	43%	Kazakhstan	57%
46%	36m 27s	Ireland	49%	Scotland	51%
45%	36m 13s	France	52%	Scotland	48%
45%	36m 08s	England	53%	Ireland	47%
45%	35m 48s	Ireland	61%	Kazakhstan	39%
45%	35m 56s	New Zealand	55%	France	45%
45%	35m 49s	Wales	62%	Sweden	38%
44%	34m 51s	South Africa	38%	Wales	62%
44%	34m 48s	Australia	63%	South Africa	37%
43%	34m 35s	New Zealand	51%	Australia	49%
43%	34m 23s	USA	48%	Ireland	52%
42%	33m 50s	Canada	41%	Sweden	59%
41%	32m 55s	New Zealand	42%	Wales	58%
41%	32m 24s	Canada	45%	Scotland	55%
40%	32m 17s	Australia	62%	France	38%
40%	32m 03s	USA	48%	Canada	52%
40%	31m 38s	France	48%	Canada	52%
40%	31m 50s	New Zealand	54%	South Africa	46%
39%	31m 34s	USA	59%	Kazakhstan	41%
39%	31m 06s	Ireland	53%	USA	47%
38%	29m 59s	Canada	45%	Scotland	55%
35%	28m 22s	Australia	45%	Wales	55%

The following table is a summary of the above, showing the overall average possession time obtained by all 12 teams: It can be seen that **Wales and England each** obtained almost 50% more possession than **Canada**.

South Africa obtained less possession than their opponents in all 5 of their matches.



ENG
WAL
SCO
SWE
IRE
AUS
NZL
FRA
KAZ
USA
RSA
CAN

WRWC 2010	WRWC 2006
20m 31s	19m 04s
20m 27s	
18m 54s	16m 17s
18m 52s	
18m 09s	15m 39s
18m 07s	18m 31s
17m 52s	18m 13s
17m 32s	16m 19s
16m 48s	17m 08s
16m 34s	14m 53s
14m 52s	13m 36s
13m 58s	15m 19s

6.0 ACTIVITY CYCLES

Activity cycles comprise - ruck/mauls, passes, and kicks.

The following paragraphs show the number of rucks/mauls, passes and kicks made in WRWC 2010.

	WRWC 2010	WRWC 2006
Passes	239	220
Rucks/Mauls	161	131
Kicks	33	43
Kick:Pass Ratio	1 to 7	1 to 5

6.1 PASSING

Games, on average, contained **239** passes (WRWC 2006 – 220).

The most by any team in a game was 222 – the fewest, 54. The attached table shows the average passes per game per team:

Again, there were noticeable differences between the 12 teams with **Wales** making 35% more passes than **South Africa**. This happened however, simply because Wales had more possession – the data shows that South Africa actually passed at a higher rate. These figures are shown in the attached table:

Average Passes per game
Most Passes in one game
Least Passes in one game

	WRWC 2010	WRWC 2006
Average Passes per game	239	220
Most Passes in one game	368	266
Least Passes in one game	186	153

	Average Passes		Rate of Passing	
	WRWC 2010	WRWC 2006	WRWC 2010	WRWC 2006
AUS	157	121	8.7	6.5
WAL	146		7.1	
ENG	144	124	7.0	6.5
NZL	130	146	7.3	8.0
USA	116	103	7.0	6.9
IRE	113	94	6.2	6.0
RSA	108	96	7.2	7.1
FRA	108	97	6.1	5.9
KAZ	105	127	6.2	7.4
SCO	104	105	5.5	6.5
CAN	104	110	7.4	7.2
SWE	101		5.3	

On occasions, averages can obscure significant extremes. A country may make an exceptionally high number of passes in one game while making very few in another. Other teams may however have a more consistent rate of passing. This is indicated in the following table which shows, for each team, the number of passes per country per game, together with the most in a game and the least in a game – and the difference between the highest and the lowest.

	Average	Most	Least	Difference between most and least
USA	116	127	102	25
CAN	104	122	89	33
SCO	104	122	76	46
NZL	130	166	107	59
RSA	108	146	77	69
FRA	108	154	72	82
IRE	113	176	84	92
ENG	144	176	80	96
AUS	157	206	104	102
KAZ	105	171	67	104
SWE	101	163	54	109
WAL	146	222	83	139

It can be seen from the table that there were noticeable contrasts between the highs and lows of certain teams. **Canada** were extremely consistent, there being a difference of only 33 passes between their highest and lowest passing games. In **Wales'** case however, the difference between the highest and lowest was 139.

6.2 PLAYER PASSING

Total passes made in the championship were broken down into 3 groups:

- Passes made by forwards
- Passes made by the scrum half
- Passes made by backs

All the passes made in WRWC 2010 have been allocated into these 3 groups, and are shown in the attached table:

		Total Passes	Passes by Forwards	Passes by Scrum half	Passes by Backs
	AUS	786	111	373	302
	ENG	722	93	287	342
	WAL	720	119	350	259
	NZL	651	83	258	310
	USA	580	63	309	208
	IRE	563	80	280	203
	RSA	539	86	215	238
	FRA	538	89	259	190
	KAZ	526	94	196	236
	CAN	519	81	238	200
	SCO	519	51	298	170
	SWE	504	69	250	185
	TOTAL	7175	1019	3313	2843

What the above table shows is the number of passes made by the three groups of players. It simply shows how active they were in passing the ball. **Wales's** forwards, for example, made over twice as many passes as **Scotland's**.

	WRWC 2010	WRWC 2006
Passing % by forwards	14%	15%
Passing % by scrum half	46%	43%
Passing % by backs	40%	42%

The following table takes this further. It shows the proportion of a team's passes made by each group. In other words – of all the passes made by a team, what proportion were made by the forwards? what proportion by the scrum half? and what proportion by the backs. Such tables can show if certain teams use forwards more as suppliers of the ball for onward transmission by the backs, rather than the forwards themselves being more involved in the distribution process. Overall, the percentages for each of the 3 groups can be seen in the attached tables

		% by Forwards	% by Scrum Half	% by Backs
	KAZ	18%	37%	45%
	FRA	17%	48%	35%
	CAN	16%	46%	38%
	WAL	16%	48%	36%
	RSA	16%	40%	44%
	SWE	14%	50%	36%
	AUS	14%	47%	39%
	NZL	13%	40%	47%
	ENG	13%	40%	47%
	SCO	10%	57%	33%
	USA	11%	53%	36%
	IRE	14%	50%	36%

		WRWC 2010
	RSA	1 to 3
	AUS	1 to 3
	ENG	1 to 4
	NZL	1 to 4
	KAZ	1 to 4
	CAN	1 to 4
	FRA	1 to 4
	WAL	1 to 4
	IRE	1 to 4
	USA	1 to 5
	SWE	1 to 5
	SCO	1 to 7

The next table shows the number of times each countries' forwards had the ball in their hands and then notes the number of times they passed it. This is expressed as a ratio so that if a team's forwards passed the ball 20 times having received it 100 times, the ratio would be expressed as 1 to 5 – ie 1 pass for every 5 possessions. Again, the table shows major differences between the countries with **Scotland's** forwards being the forwards least likely to pass the ball and **South Africa and Australia's** the most

This difference between the forwards of each country is even more graphically illustrated when the forwards are broken down into the 3 groups of (a) front row, (b) second row and (c) back row.

This time the relationship between passes and possession is expressed in percentage terms, so that if a group of forwards received the ball 20 times and passed it 6 times, it means they passed it on 30% of occasions. The front row passing percentages for each team is shown in the attached table: It shows that **Canada's** front row passed the ball on only 12% of occasions which amounted to just 9 passes out of the 73 times they had the ball in their hands. Their 2 props made a total of 4 passes in the entire tournament.

		% of times ball passed by Front Row WRWC 2010
	WAL	24%
	IRE	24%
	ENG	21%
	USA	20%
	RSA	19%
	AUS	18%
	SCO	18%
	KAZ	17%
	FRA	16%
	NZL	13%
	CAN	12%
	SWE	11%

		% of times ball passed by 2 nd Row WRWC 2010
	ENG	42%
	FRA	38%
	NZL	32%
	SWE	25%
	RSA	25%
	WAL	23%
	IRE	22%
	KAZ	19%
	AUS	14%
	SCO	12%
	CAN	10%
	USA	9%

The table show that England's second row were almost 5 times as likely to pass the ball as USA's second row. It shows that **USA's** second row passed the ball on only 9% of occasions which amounted to just 5 passes out of the 55 times they had the ball in their hands.

This chart shows **Australia's** back row were the most likely to pass and **Scotland's** back row were the least likely to pass the ball.



AUS
CAN
RSA
KAZ
NZL
WAL
IRE
FRA
SWE
USA
ENG
SCO

% of times ball passed by Back Row WRWC 2010	
AUS	38%
CAN	37%
RSA	35%
KAZ	35%
NZL	30%
WAL	27%
IRE	26%
FRA	26%
SWE	23%
USA	23%
ENG	20%
SCO	17%

6.3 PASSING MOVEMENTS

Passes are grouped into passing movements – i.e. one pass movement, two pass movements and so on. The data shows that some **81%** of all passing movements contained two passes or less. There were however noticeable differences between the various countries as shown in the table

The data also shows that **Scotland** had just 10 passing movements with more than 3 passes. This contrasts with **England** and **Australia** who each had 35.



SCO
FRA
IRE
SWE
USA
KAZ
AUS
CAN
WAL
RSA
NZL
ENG

% of passing movements with 2 or fewer passes WRWC 2010	
SCO	90%
FRA	85%
IRE	84%
SWE	83%
USA	83%
KAZ	83%
AUS	82%
CAN	80%
WAL	79%
RSA	77%
NZL	77%
ENG	72%

6.4 RUCKS/MAULS (2nd PHASE)













Games, on average, contained **161** rucks/mauls (WRWC 2006 – 131)

	WRWC 2010	WRWC 2006
Average R/Ms per game	161	131
Most R/Ms in one game	198	159
Least R/Ms in one game	116	98

The most by any team in a game was **115** and the least, **46**. The average for all countries is shown in the attached table:

The above table indicates the total number of rucks/mauls created by each team in the competition expressed as average per game.

Just as in the case of passes, however, the number of rucks and mauls made by one team may be constrained because it obtained only limited possession of the ball. In order to address this, an alternative calculation has been made which relates the number of rucks/mauls to the share of ball in play time won by each team. This is expressed in the number of rucks created for every minutes' possession obtained by a team

		Average R/Ms		Rate of Ruckng	
		WRWC 2010	WRWC 2006	WRWC 2010	WRWC 2006
	WAL	103		5.1	
	ENG	91	80	4.4	4.2
	SCO	91	64	4.8	3.9
	SWE	90		4.7	
	AUS	84	83	4.7	4.5
	NZL	82	76	4.6	4.2
	KAZ	79	78	4.7	4.5
	USA	76	55	4.6	3.7
	IRE	76	61	4.2	3.9
	FRA	69	55	3.9	3.3
	RSA	60	50	4.0	3.7
	CAN	68	61	4.8	4.0













This table shows, for example, that **Wales** made 51% more passes than **Canada**. This is largely accounted for by the fact that **Wales** had, over the 5 matches, 46% more possession than **Canada**, **Wales'** rate of passing was only 6% more.

6.5 BREAKDOWN RETENTION

At the breakdown the team taking in the ball retained possession by either winning the ball or being awarded a penalty on **93%** of occasions.

The percentage success rate for almost all teams was very similar and is shown in the attached table:



		WRWC 2010	WRWC 2006
	AUS	95%	84%
	WAL	94%	
	CAN	94%	83%
	SCO	93%	88%
	IRE	93%	91%
	USA	93%	87%
	NZL	92%	92%
	SWE	91%	
	ENG	90%	90%
	KAZ	88%	88%
	FRA	88%	86%
	RSA	87%	81%

6.6 KICKING

The most by a team in a game was **31** – the least **3**. The average for all countries is shown in the attached table.

Average Kicks per game
Most Kicks in one game
Least Kicks in one game

WRWC 2010	WRWC 2006
33	41
56	67
18	32

The two highest kicking games contained 56 and 55 kicks respectively. The two lowest kicking games contained 20 and 18. Just as in the case of passes, however, the number of kicks made by one team may be constrained because it obtained only limited possession of the ball. In order to address this, an alternative calculation has been made which relates the number of kicks to the share of ball in play time won by each team. This is expressed in the number of kicks made for every minutes' possession obtained by a team

		Average no of Kicks		Rate of Kicking	
		WRWC 2010	WRWC 2006	WRWC 2010	WRWC 2006
	AUS	22	25	1.2	1.4
	NZL	21	25	1.2	1.4
	SCO	21	23	1.1	1.4
	RSA	19	17	1.3	1.3
	IRE	18	13	1.0	0.8
	ENG	18	21	0.9	1.1
	FRA	14	26	0.8	1.6
	KAZ	14	18	0.8	1.1
	CAN	13	18	0.9	1.2
	USA	13	20	0.8	1.3
	SWE	13		0.7	
	WAL	12		0.6	

6.7 SUMMARY

A summary of previous tables is shown below – it shows the average number of rucks, passes, and kicks per game and the rate for each per minute possession.

Activity Cycle Summary - Average per game and Rate per minute possession

		Rucks/Mauls		Passes		Kicks	
		Average	Rate	Average	Rate	Average	Rate
	NZL	82	4.6	130	7.3	21	1.2
	ENG	91	4.4	144	7.0	18	0.9
	AUS	84	4.7	157	8.7	22	1.2
	FRA	69	3.9	108	6.1	14	0.8
	USA	76	4.6	116	7.0	13	0.8
	CAN	68	4.8	104	7.4	13	0.9
	IRE	76	4.2	113	6.2	18	1.0
	SCO	91	4.8	104	5.5	21	1.1
	WAL	103	5.1	146	7.1	12	0.6
	RSA	60	4.0	108	7.2	19	1.3
	KAZ	79	4.7	105	6.2	14	0.8
	SWE	90	4.7	101	5.3	13	0.7

7.0 RESTARTS

Of 50m restarts, **69%** were kicked long – **31%** were kicked short and were contestable.

When restarts were kicked short, the kicking team regained possession on 1 in 4 occasions.

The table shows the type of restart kicked by each team at 50m and retention rates of short restarts.

It can be seen that there was a contrast between some of the teams. While most kicked long far more often than short, **Australia** was the only country that kicked short more often than long. Further, success rate and restart type varied between the 12 teams. The most effective teams in retaining short restarts are also shown.



50m Restarts		Retention rate
Long	Short	Short
24	5	2 of 5
23	14	4 of 14
21	10	4 of 10
21	5	2 of 5
15	4	0 in 4
14	6	2 of 6
14	4	1 in 4
14	8	0 of 8
12	9	1 of 9
10	11	1 of 11
10	0	0 of 0
5	5	3 of 5

8.0 LINEOUTS

The average number of lineouts per game was **26** (WRWC 2006 – 31)

The most line outs in a game was **41** – the least **16**.

Average no per game
Percentage competed
Possession retained

WRWC 2010	WRWC 2006
26	31
60%	68%
76%	73%

Success rates on own throw and on opponents throw-ins showed major variations. Lineout success on own throw and opposition throw are shown in the following table. It also highlights lineout steals won - and steals lost on opposition throw ins:

New Zealand had the highest success rate % on their own throw in and they also had the most steals on opposition throw ins – just as they did last year. Also, **New Zealand** did not have a single crooked throw in. While **Wales** had the second highest success rates on their own throw in they managed to steal opposition throw ins on only 3 occasions which was less than any other team

		Success %		Lineout Steals		Not straight / Pen/FK / Knock-on	
		Own Throw	Opp Throw	Lost on Own Throw	Won on Opp Throw	Own Throw	Opp Throw
	NZL	95%	33%	2	19	1	6
	WAL	84%	15%	8	3	5	4
	SCO	82%	19%	8	9	5	2
	IRE	81%	28%	9	13	6	5
	AUS	80%	30%	12	10	6	9
	ENG	79%	31%	11	15	5	6
	SWE	72%	23%	14	9	7	5
	FRA	67%	19%	9	8	8	6
	CAN	66%	24%	7	11	7	5
	USA	64%	25%	15	9	3	9
	KAZ	64%	21%	10	9	9	4
	RSA	60%	15%	17	7	3	4

9.0 SCRUMS

The average number of scrums per game was **24**

The most scrums in a game was **32** – the least **15**

Average no per game













Possession retained

WRWC 2010	WRWC 2006
24	28
87%	89%

Scrum ball retention was relatively high for all teams.

England lost possession at only 2 scrums when 2 penalties were conceded.

With such high percentage of possession retained, it is no surprise that heels against the head were few and far between. In total there were **31** tightheads in 730 scrums or 1 in 24 (*WRWC 2006 - 42 in 824 scrums – or 1 scrum in 32*). The table below shows the tight heads won and lost by each country.

		Scrum Success %		Heels against the head	
		Own Feed	Opposition Feed	Lost on Own Feed	Won on Opposition Feed
	ENG	96%	22%	0	3
	RSA	93%	9%	2	1
	SCO	92%	14%	0	2
	NZL	92%	12%	1	3
	USA	92%	18%	1	4
	WAL	90%	6%	2	1
	AUS	90%	11%	0	2
	SWE	85%	10%	6	2
	FRA	83%	19%	5	7
	CAN	79%	12%	5	5
	KAZ	79%	11%	3	1
	IRE	72%	8%	6	0

Of all scrum penalties, 55% were awarded to the team putting the ball in.

10.0 PENALTIES / FREE KICKS

In WRWC 2010, the average number of penalties and free kicks awarded in a game was **25**.

There was a wide spread between the matches.

The most conceded by a team in one match was 28 - the least 4.

Average no per game
Most Pens/FKs in one game
Least Pens/FKs in one game

WRWC 2010	WRWC 2006
25	24
41	46
13	13

The following table comprises the total penalties awarded to and conceded by each team. However, because the number of penalties can vary from match to match, a better measure is the **proportion** of penalties conceded by a team in all their matches compared with their opponents. This shows that **England** were the least penalised team in relation to their opponents while **Kazakhstan** and **Canada** were the most, conceding almost twice as many penalties than their opponents.

		Pens/FKs For and Against		Proportion of Pens/FKs	
		Pen/FK For	Pen/FK Against	% Pen/FK For	% Pen/FK Against
	ENG	71	42	63%	37%
	SCO	63	38	62%	38%
	WAL	80	51	61%	39%
	SWE	88	65	58%	42%
	AUS	62	54	53%	47%
	IRE	67	63	52%	48%
	USA	64	70	48%	52%
	RSA	58	70	45%	55%
	NZL	57	70	45%	55%
	FRA	50	60	45%	55%
	KAZ	44	85	34%	66%
	CAN	39	75	34%	66%

Only one team was penalised fewer times than their opponents in all their matches – **Wales**.

Of the penalties and free kicks awarded, the penalty decisions were as follows: Kick to touch 57%, Tap kicks 27%, Kicks at goal 11% and Scrum 5%.

10.1 CATEGORIES OF OFFENCES PENALISED

The following table groups the penalties awarded into 8 categories – these are as follows.

	%
Ruck/tackle on ground	48%
Scrum	14%
Foul Play	13%
Offside	11%
Maul	6%
General Play	5%
Lineout	3%
	100%

11.0 CARDS – YELLOW & RED

There were **2** red cards issued (WRWC 2006 – 0)

There were **64** yellow cards issued during the championship, an average of 2 per game. In 2006, the comparable figure was *18 or 0.6 per game*.

Of the 30 matches, there were 27 which contained at least one yellow card, meaning 3 (or 10%) of all matches did not contain a single yellow card (WRWC 2006 – 40%). The most yellow cards in one match was 7 (*Kazakhstan v South Africa*).

The table attached shows the breakdown of yellow cards per team.

The reasons for each of the yellow cards were as follows:

	WRWC 2010
Ruck/Tackle	36
Offside	12
Dangerous Tackle/Charge	5
Foul Play (punching/kicking/trampling)	5
Collapse Maul	5
Scrum	1
Total	64

	WRWC 2010	WRWC 2006
KAZ	10	2
RSA	9	3
AUS	7	2
CAN	7	none
NZL	6	none
FRA	6	1
USA	5	2
SWE	5	n/a
IRE	4	1
WAL	3	n/a
SCO	1	1
ENG	1	1