Frequently Asked Questions on the INF World Rankings

How does this system work?

There are two important definitions
- a <u>rating</u> is a number, like a score
- a <u>ranking</u> is a position (1st, 3rd, 9th etc)

To qualify for a rating, a country
- must be a full member of INF
- must have played at least one international match (with the umpire appointed by INF) over the rating period

Rating and Ranking

How do you qualify for a ranking?
- can't give world ranking based on very few matches
- not statistically sound
- doesn't show sustainable performance

So we set a minimum of 8 rated matches
- 8 or more = have world ranking (provided at least 2 are against other rated teams)
- between 1 and 7 = have only a rating
- unranked teams appear below the main table in a separate list

What matches count?

- Like many sports, netball operates on a four year cycle
- Ratings are based on maximum of 4 years' past results
- So would normally cover one World Championships and one Commonwealth Games tournament
- Ratings currently (July 2017) cover all full international matches played since July 2014

How do we keep ratings up to date and relevant?

For matches played long ago, less importance should be placed on the results
We reflect this in two ways
- Each June 30, the oldest year of results are dropped (the annual update)
- Matches played in first two years of rating period only weighted at 50% ("half as relevant")
- So as of July 2017, July 2014 – June 2016 matches are 50% weighted
- But July 2016 – June 2018 matches are 100% weighted

The next annual update will be in July 2018; only matches from July 2015 will be included and so on.

The Annual update is the one time ratings can change other than through new results.

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How do teams earn rating points?

After every match the two teams are awarded a certain number of points (not to be confused with the score in the match itself)
Only two factors determine these points
- The result (win, draw, lose)
- The rating of the opponents

It is vital for rating of opponent to be reflected otherwise it would penalise teams for having fixtures against strong countries and reward those who only play weak sides.

The rating formula automatically adjusts for how easy or difficult your fixture list is, so no-one can claim that their ranking has been unduly influenced by their opponents' strength.

How do we apply the basic principles?

Winning a match always improves your rating
Losing a match always lowers your rating
You get more points for beating a team with a high rating
You get fewer points for losing to a team with a low rating
As a reminder – no account is taken of:
- margin of victory (100 – 10 or 51-50 are just wins)
- venue (home or away or neutral)
- importance of the match (World Cup Final or small regional competition)
- the winner of the series - all internationals are treated as stand-alone events
- The impact of any win/loss on your **ranking** will depend on how your new rating compares with the ratings of the teams around you

But what is a rating?

The rating is an average – total points earned divided by number of matches played
So it doesn't penalise countries who play less often
An example
- your team plays 4 matches, earning 70, 90, 110, and 130 points
- Your rating is the total points earned (400) divided by matches played (4) = 100
- Suppose you win your next match and earn 150
- New rating will be 550 (400+150) divided by 5 = 110

How does the strength of opponents works in practice?

Suppose you have 4 teams:
- A is rated 120, B and C are rated 100 and D is rated 80. All have played 10 matches
- A ought to beat D. If it does, A will go up from 120 to 121: while D will fall from 80 to 79
- But if D beats A (surprise result), A will fall from 120 to 112 with D jumping from 80 to 88
- B and C are evenly matched; the winner will go up from 100 to 105, the loser drop from 100 to 95.

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So by beating a much lower ranked team earns you only a small uplift to your rating and doesn't reduce the losing team's rating much either

But a surprise result will have a much bigger impact on both teams

A numerical example

If you win a match you earn 50 points more than your opponent's rating
But if you lose a match you earn 50 points less than your opponent's rating

- Team A has 960 points from 8 matches, rating =120
- Team B has 1000 points from 10 matches, rating = 100
- Team A should win. If it does it earns 150 points, B gets 70 points; A's new rating is then 1110/9=123, B's is 1070/11 = 97
- But if Team B wins, it earns 170 points but A gets only 50 points; A's new rating is then 1010/9 = 112, B's is 1170/11 = 106

Note: A slightly different rule applies if the teams are more than 40 rating points apart. In this case, for the purposes of determining the points earned, you assume your opponent was separated by exactly 40 points.

So beating a stronger team gives a large reward, but losing to a stronger team leads to only a small ratings penalty. Similarly, there is a big penalty for losing to a weaker team, but not much reward for beating a weaker team.

This illustrates three important principles:

- Winning helps your rating whoever you play
- You have more to gain and less to lose if playing stronger teams, but chances of winning are correspondingly lower
- There should be no inbuilt rating advantage in playing some teams and avoiding others

What happens in the case of a draw?

A draw is halfway between a win and a loss. The points scored by each team is therefore the average of the points for winning and the points for losing.

What happens if you don't play?

Your rating stays the same, until the next annual update, when your oldest results are dropped
But your ranking may not stay the same

- teams below might start winning and overtake you
- or teams above might lose and drop below you

If you don't play for long enough, you fall below the 8 match minimum and lose your ranking altogether.

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How do new countries acquire a rating?

As explained earlier, the points earned from a match is based on your result and on the rating of your opponent

So if a new country starts playing, it is essential that its performances can be measured in context, i.e. by comparing with a side whose standard is already known.

But if two teams (or more) previously unrated countries play each other, then there is no basis for gauging how good they are relative to the rest of the world

How can a team's ranking improve without them playing?

A team that loses a match will sometimes (as a result) fall in the rankings; i.e. their rating will drop below a side they were previously ahead of.

Therefore the side that was below them, and is now above them, has by definition improved its ranking without playing.

The other way this can happen is following the annual update. If a team has had good recent results, but poorer results in the past (that the update now ignores), then both their rating and ranking can improve on 1 July, without playing any new matches.

Ultimately a team that stops playing for long enough will lose its ranking altogether

Should a team that has not played for three years be ranked above one that is in regular competition?

In 2011 there was some concern that a team that had barely played since 2008/09 was occupying a higher ranking that many of its neighbours who had recently competed in various regional tournaments.

As explained above, apart from the annual update, a rating will remain unchanged even if they have not played, remember the rating = points earned divided by matches played over the past 3-4 years.

So are the rankings fair?

One way to gauge fairness is to ask whether they successfully predict the outcomes of matches.

If higher rated teams normally beat teams rated below them, then this should indicate the ratings to be sound. Over the past 4 years this has been shown to be the case.

The INF World Rankings were reviewed at the INF Board Meeting in June 2012, with David Kendix, Statistician, who was retained by INF to develop the ranking methodology in 2007.

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Following a detailed discussion the Board was satisfied that we have a robust and reliable rankings system that presents a true reflection of the quality and standing of the performances of international teams and that this system can be used with confidence for qualification purposes.