

## Altitude sickness; South American nations are fighting FIFA's restrictions on hosting games

by Mark Zeigler

In February, Brazilian club Flamengo played a Copa Libertadores match at tiny Real Potosi of Bolivia. Flamengo needed two second-half goals to erase a 2-0 halftime deficit and escape with a 2-2 tie.

The next day, Flamengo officials called the tie "heroic" and relayed harrowing scenes from Estadio Mario Mercado Vaca Guzman of players with splitting headaches, of players feeling so dizzy they thought they would pass out, of players doing their most spirited running during stoppages in play to grab oxygen canisters on the sideline. Of "unsporting and inhumane conditions."

Flamengo also said this: It would never, ever do it again.

Potosi's elevation: 4,070 meters, or 13,353 feet, or 2 1/2 miles.

The staunch refusal of one of South America's most celebrated clubs to play matches "at an altitude above the limit recommended by sports medicine" made its way from the Andes to FIFA headquarters in Switzerland, and in late May FIFA's executive committee finally acted on a political futbol that it had been bouncing around for years. Citing health concerns and competitive balance, it banned all FIFA-sanctioned matches at elevations above 2,500 meters, or 8,202 feet.

And so triggered the latest international incident in a sport famous for them, altitude quickly giving way to attitude. This time it pitted all-powerful FIFA against impoverished Andean nations, with the South Americans poised to pull off the shocking upset.

The initial FIFA ban wiped out 2010 World Cup qualifiers at national stadiums of Bolivia, Ecuador and Colombia as well as secondary stadiums in Chile, Mexico and Peru. (Mexico's Estadio Azteca is at about 7,500 feet, but Toluca's Nemesio Diez is at 8,793.) Amid furor from South American governments, within

weeks FIFA had raised its altitude threshold to 3,000 meters, or 9,842 feet - exempting everyone but La Paz, Bolivia and Cuzco, Peru.

Now comes word that FIFA President Sepp Blatter will raise it even higher to allow Estadio Hernando Siles in La Paz, affectionately known as "El Nido del Condor."

The Condor's Nest. Elevation: 11,929 feet.

The biggest winner in all this is Evo Morales, Bolivia's president and self-described soccer addict who realized the issue could be the elusive glue for his landlocked and increasingly fractured nation.

The morning after FIFA's May 27 altitude pronouncement, Morales called an emergency cabinet meeting and began organizing massive public protests. He arranged a game at an Andean scientific observatory that sits at 17,300 feet. Then he one-upped that, riding a helicopter to a snowy saddle of Bolivia's highest peak and playing a match with local mountaineers at 19,700 feet.

Morales, wearing a green jersey, scored the winning goal and proclaimed: "Wherever you can make love, you can play sports."

More recently, Morales flew to Zurich and met with Blatter, who conceded it was "a very enlightening get-together" and agreed to "reconsider this decision." South American media already are reporting the Condor's Nest will be allowed to host World Cup qualifying matches again.

"This turned out to be a huge political discussion on a subject that was solely aimed at protecting players' health," Blatter says. "We do not want to keep people from playing soccer at altitude ... (but) we do not want

casualties on the field."

Blatter's other argument is that playing in thin air violates "the spirit of the game," particularly when opposing players have "no possibility of acclimatization" and countries could use stadiums at lower elevations instead.

Experts in physiology and altitude, however, say he might be wrong on both counts.

The general rule is that for every 1,000 feet of elevation your sustained aerobic capacity - crucial in a sport such as soccer - diminishes by about 1 percent. For a team based at sea level having to play in La Paz, that's about 12 percent.

"That's a huge number," says U.S. Olympic Committee physiologist Jay T. Kearney, who has done extensive research on altitude and athletic performance. "If you look at objective sports, the margin of victory is down under 1 percent."

But sports medicine experts also say that while playing at 12,000 feet might be uncomfortable, there is little evidence to suggest it could be fatal. A bigger health risk, they say, comes from heat and humidity - a bunch of guys from the dry, cool air of Bolivia playing in the tropics of Brazil.

"Clearly there is a competitive disadvantage if you take a sea level team and they have to play a game at altitude," Kearney says. "But in the same way, there are going to be some disadvantages for an altitude team coming down to sea level.

"I would submit to you that heat and humidity could be a more profound competitive disadvantage than

altitude, although you can acclimate to the heat and humidity quicker."

Blatter has yet to produce medical studies showing the dangers of playing above 8,200 feet. He also has not wiped the egg off his face from a visit to La Paz in 2000, when he assured Bolivians, during a previous altitude debate, that World Cup qualifiers could be held there.

On a wall of the Condor's Nest is an engraved plaque with Blatter's words from that day:

"I was born in the mountains. My village in Switzerland sits across from the highest mountains in Europe. For that reason, I am not afraid of heights."

## THE AIR UP THERE

Most of the world's major stadiums at high elevations are in the Americas, and in particular the Andes mountain range of South America:

Elevation - Stadium - City

11,929 - Hernando Siles - La Paz, Bolivia

10,656 - Garcilasco de la Vega - Cuzco, Peru

9,222 - Olimpico Atahualpa - Quito, Ecuador

8,793 - Nemezio Diez - Toluca, Mexico

8,530 - Municipal de Calama - Calama, Chile

8,386 - El Campin - Bogota, Colombia

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