

R50BN

That's what potholes cost motorists in repairs and injuries

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R50 BILLION – that's how much motorists are spending every year on vehicle repairs and injuries caused by potholes, says a study by the SA Road Federation (SARF).

The figure is based on information obtained from claims to insurance companies for car repairs for, among other things, shock absorbers, vehicle suspensions, tyre replacements and repairs.

It also includes the cost of medical treatment of injuries sustained in accidents caused by potholes or motorists swerving to avoid them.

SARF executive director Malcolm Mitchell said there was a strong correlation between the road condition and road-user costs.

"R50bn... it is a conservative figure. We don't know for certain, but it is a large amount of money."

But, with proper road maintenance by local government, it wouldn't be nearly that high, according to the Council for Scientific and Industrial Research (CSIR), which has released a study into the causes, costs and solutions to South Africa's pothole problem. According to Hans Itman, the road maintenance backlog stood at R100bn and focus needed to shift from developing more roads to maintaining existing ones.

It's not just our heavy summer rains that can be blamed, explains chief researcher Dr Phil Paige-Green.

"The combination of unusually wet conditions over long periods, excessive traffic and poorly maintained roads is a sure recipe for the development of potholes."

According to Paige-Green, potholes are formed when water seeps into cracks in the road surface, and weakens its structure. To prevent this, that top black layer of road – commonly referred to as "tar", but which is actually a material called "bitumen" – has to be looked after.

Bitumen is a sealant, acting as a waterproof layer to roads. But time takes its toll on the material. Constant exposure to ultra-

What could we do with R50bn?

- Run Gauteng for about 310 days;
- Run the SAPS for nearly a year;
- Buy 100 000 flats or houses costing R500 000 each;
- Buy 6 billion litres of unleaded 93 octane petrol;
- Fly 5 555 555 people to Brazil for World Cup 2014.

violet rays from the sun dries it out and makes it harder and less flexible. Heavy traffic then puts it under pressure and deforms it.

And, just like a wire that is constantly bent backwards and forwards, the bitumen begins to break and crack.

If the cracks were repaired, that is where the problem would end. After all, it's only when water gets into cracks that potholes start to form. Unfortunately, this proactive maintenance is not happening on South Africa's provincial roads.

"Potholes are typically 'repaired' on an *ad hoc* or reactive basis, often quite some time after their formation," reads the study.

"When potholes are not repaired timeously, they deteriorate rapidly and become larger and deeper until patching maintenance is no longer possible. Extensive reconstruction of the road is then necessary."

It's an issue that could be avoided with continuous, preventative maintenance. That grey, dried-out bitumen can be restored with a rejuvenating spray at just R5m.

Wait for cracks or potholes to show, however, and you are looking at between R15 and R38m for a brand-new layer of bitumen. Allow the road to deteriorate completely and the cost rockets to R3.5 million per kilometre of road that needs to be repaired.

Municipal budget constraints only exacerbate the issue – only R22bn is being allocated to road maintenance each year. Around R22bn is needed.

"It is imperative that funding



SINK OR SWIM: Dangerous potholes, like this one, are nice for ducks to take a dip in, but they cause a lot of damage to cars and people and are expensive to fix – simply because there is no proper road maintenance taking place.

PICTURE: NEIL BAYNES

repeated, patching of potholes which is often incorrectly done." Last year's rainy season brought with it a torrent of car accidents caused by potholes. And with those summer storm clouds gathering on the horizon, Paige-Green can only hope for the best.

rather than reactive – routine road maintenance leading up to summer rainfall seasons," says Paige-Green.

"That will go a long way towards saving costs of the