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Journal Name:	**Physical Science International Journal**
Manuscript Number:	**Ms_PSIJ_35306**
Title of the Manuscript:	**MECHANISM OF FLOW IN PATCHY GRAVEL AND VEGETATED BEDS**
Type of the Article	**Original Research Article**

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Compulsory REVISION comments	**The methodology and the results/discussion are correct although the presentation as it is should increase in quality. The interpretation of data is good. I consider that the conclusion section is two extensive. Authors should make an effort to summarize the main results.** **Abstract: Remove 'using a 3D Doppler Velocimeter'** **Abstract: Remove 'patchy'** **Introduction: Change 'investigated'. It should be investigation.** **Figure 1 should not be presented as it is, since the figure is taken from Nepf (2012). The authors should propose a different plot, made by them, outlining the main hysdrodynamcis described by Nepf (2012).** **Aims and Scope: The reference by Jesson et al 2010 Is not in the reference list.** **Aims and Scope: Remove 'Related to this'** **Aims and Scope: Should be 'shear velocity'** **Exp. Methods: should be 22 m (I guess)** **Exp. Methods: I consider that the patchy structure is not clearly addressed in the paper. Is the flow stable over each of the patchy structures?. Why the authors simply designed a channel with a double of structure of half a channel with the flexible vegetation, all along the flume, and the same for the rigid one?** **Exp. Methods: Define at what y distances the CRSi are taken.** **Results: In all the figures, please, use a, b, or a, b, c and d. It will clarify the presentation of the figures,** **Results: Use flexible bed and rigid bed, all over the manuscript. Do not use surface.** **Results: I need more evidences proving that the hole of length scale of 17 cm is not adding some disturbances when measuring the hydrodynamics.** **Results: Page 6, in all paragraphs remove the sentences that advance the comments of results in the discussion, as for example: and the resulting vertical shear as further examined in the subsequent results, or 'The effect of the near bed accelerated flow on the vertical shear ….'** **Results: page, 7. Should be Nezu and Nagawaka (1993).** **Discussion: Remove all reference to Figures, except for Figure 9 and Figure 10.** **Discussion: Remove in Page 9, Referring to Figure** **Discussion: I recommend to change all references to EXPT1 and EXPT2 to 'rigid bottom bed' and**	

	'flexible bottom bed' **Conclusions: Jesson et al 2010 is not in the reference list.** **Conclusions: Remove any reference to Figures and Experiments, as in the discussion section, please.** **Conclusions: Remove the last two conclusions.** **Figure 3: Draw a vertical line at y/B=0.** **Figure 6: Explain better the figure, adding an scale for the velocity.** **Figure 5: Rewrite the text. It is confusing.** **Last figure should be Figure 10.** **References: The texts should be without capitals. Some of them are abbreviated and some of them aren't.** **General: Could the authors analyse what the length scale of the transition between the lateral beds is. I guess the transition of Um on Figure 3 (left) is different at each side of y/B=0.5, specially at z/H= 0.07.**	
Minor REVISION comments		
Optional/General comments		

Reviewer Details:

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